S. Hrg. 100-347

RESTRUCTURING THE DEPARTMENT OF ENERGY'S URANIUM ENRICHMENT PROGRAM

HEARINGS

BEFORE THE

SUBCOMMITTEE ON
ENERGY RESEARCH AND DEVELOPMENT

OF THE

COMMITTEE ON
ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE

ONE HUNDREDTH CONGRESS

FIRST SESSION

ON

S. 1084

TO ESTABLISH THE AMOUNT OF THE COSTS OF THE DEPARTMENT OF ENERGY'S URANIUM ENRICHMENT PROGRAM THAT HAVE NOT PREVIOUSLY BEEN RECOVERED FROM ENRICHMENT CUSTOMERS IN THE CHARGES OF THE DEPARTMENT OF ENERGY TO ITS CUSTOMERS

S. 1100

TO AUTHORIZE AND DIRECT THE SECRETARY OF ENERGY TO ESTABLISH A PROGRAM TO PROVIDE FOR RECLAMATION AND OTHER REMEDIAL ACTIONS WITH RESPECT TO MILL TAILINGS AT ACTIVE URANIUM AND THORIUM PROCESSING SITES

MAY 4 AND 8, 1987

Printed for the use of the
Committee on Energy and Natural Resources

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CONTENTS

Page

Hearings:
- May 4, 1987 1
- May 8, 1987 211

S. 1084 3
- Amendments 5
- Summary 40

S. 1100 44
- Amendments 85
- Summary 100

MONDAY, MAY 4, 1987

STATEMENTS

Dean, Alan, chairman, panel on executive organization and management, National Academy of Public Administration 206

Diamond, Mitchell S., vice president, Booz, Allen & Hamilton, Inc., accompanied by Robert A. Tyre, vice president; and Anjan Chatterjee, principal 139

Domenici, Hon. Pete V., a U.S. Senator from the State of New Mexico 123

Ford, Hon. Wendell H., a U.S. Senator from the State of Kentucky 1

Hecht, Hon. Chic, a U.S. Senator from the State of Nevada 127

Johnston, Hon. J. Bennett, a U.S. Senator from the State of Louisiana 128

Longenecker, John R., Deputy Assistant Secretary for Uranium Enrichment, Department of Energy 109

Rossin, Dr. A. David, Assistant Secretary for Nuclear Energy, Department of Energy, accompanied by John R. Longenecker, Deputy Assistant Secretary for Uranium Enrichment, Department of Energy 108

Seidman, Dr. Harold, guest scholar, Brookings Institution, and member, National Academy of Public Administration 192

Tyre, Robert A., vice president, Booz, Allen & Hamilton, Inc 140

FRIDAY, MAY 8, 1987

STATEMENTS

Burstein, Sol, vice chairman, Wisconsin Electric Power Co., on behalf of the Edison Electric Institute and the American Nuclear Energy Council, accompanied by Loring Mills, vice president for nuclear activities, Edison Electric Institute 233

Chambliss, R. Edward, Jr., managing director, Salomon Bros., Inc., accompanied by Steven Bell, manager, Washington office, Salomon Bros., Inc.; and Roger Taylor, director, corporate bond research department, Salomon Bros., Inc 260

Domenici, Hon. Pete V., a U.S. Senator from the State of New Mexico 226

Fager, John F., senior vice president, engineering and operations, MSU System Services, Inc 243

Ford, Hon. Wendell H., a U.S. Senator from the State of Kentucky 211

Hopkins, Clyde C., senior vice president, Martin Marietta Energy Systems, Inc., accompanied by Dr. Jim Rushton, director of business services, enrichment enterprise, Martin Marietta Energy Systems, Inc 212

Robinson, Dr. C. Paul, senior vice president and principal scientist, Ebasco Services, Inc., on behalf of the American Enrichment Co., accompanied by Donald Repici, American Enrichment Co., and John LaFond, American Enrichment Co 281

APPENDIX

Additional material submitted for the record 297

RESTRUCTURING THE DEPARTMENT OF ENERGY'S URANIUM ENRICHMENT PROGRAM

MONDAY, MAY 4, 1987

U.S. SENATE,
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:05 p.m., in room SD-366, Dirksen Senate Office Building, Hon. Wendell H. Ford, presiding.

OPENING STATEMENT OF HON. WENDELL H. FORD, A U.S. SENATOR FROM THE STATE OF KENTUCKY

Senator FORD. May I have your attention, please?

I will give a short opening statement, then we will get to the witnesses.

Today's Subcommittee on Energy Research and Development begins hearings on the redirection of the Department of Energy's uranium enrichment program.

Hearings that this subcommittee held in March left little doubt in this Senator's mind that the uranium enrichment program is in trouble, and that the 100th Congress must totally restructure the enrichment program to ensure that there will be a viable enrichment capability in the United States.

Witnesses at our hearings in March were nearly unanimous on the danger to the program if Congress fails to act now. It could lose its customers. In fact, it could shut down altogether.

These witnesses were also nearly unanimous on another point. The solution to the problems of the program includes the establishment of a government corporation to manage the uranium enrichment enterprise.

This corporation would offer the flexbility necessary for the enrichment program to make efficient businesslike decisions which respond to the dictates of today's highly competitive market.

This corporation would be freed from the constraints of the bureaucracy that now keep DOE from winning customers in the highly competitive world enrichment market.

This corporation would be freed from the annual Federal budget cycle to develop and test the kind of long term plans needed to win against this competition.

This corporation would be free to price its product, to get business, to keep U.S. enrichment capacity operating, and to keep the United States workers at their jobs.

This corporation would bolster our national security by keeping the essential supply of enriched uranium for domestic utilities in the United States.

On April 28, Senator Johnston and I introduced amendment No. 176 to establish such a government corporation. Our amendment will reorient the U.S. uranium enrichment enterprise to deal with the realities of today's uranium enrichment market.

The amendment establishes a United States enrichment corporation to operate the U.S. uranium enrichment program as a continuing commercial enterprise on a businesslike, economic and efficient basis.

On the same day, Senators Domenici, Simpson, Bingaman, and Wallop introduced amendment No. 177, that establishes a corporation aimed at the same goals.

The U.S. uranium enrichment program has faced major changes in the marketplace, but has not reacted to them at all well.

When Congress set up this program, the United States had a world monopoly in the enrichment of uranium. The program was set up with this fact fully in mind.

The structure under which this program now operates is appropriate to a world without competition. DOE spends money to run the program, then charges prices in an attempt to recover its cost.

It is assumed that the customers will be there because they have nowhere else to go. Today, DOE's customers have somewhere else to go. There is a large secondary market of enriched uranium held in inventories all around the world.

And there is strong foreign competition, backed by foreign governments: France, Britain, the Netherlands, and the Soviet Union.

DOE has not reacted well to the changes in the market for uranium enrichment. DOE was building new capacity at Portsmouth, Ohio, GCEP plant as demand for enrichment was dropping.

DOE entered into a long term take or pay contract for huge amounts of electricity that it does not need, some 4,300 megawatts versus 100 megawatts of need.

In so many areas, DOE had its foot on the accelerator, when it should have been reaching for the brake.

This is history, and much of it is unfortunate. It has cost everyone a lot of money, and it has brought the United States enterprise to the brink of collapse.

Now is the time to talk about solutions. That is why Senator Johnston and I introduced our amendment, and that is why Senators Domenici, Simpson, Bingaman, and Wallop introduced their amendment.

We all want to get at solving this problem. We are here today to listen to comments on our approaches.

Our witnesses should feel—and I underscore—feel free to tell us what they think of the corporation idea. How well will it work? Have we set it up right?

Will it solve the many problems that the U.S. enrichment enterprise faces? We look forward to hearing their views.

At this point, I ask unanimous consent that the text of amendment No. 176, and No. 177, and a summary of their major provisions, be printed in the hearing record at this point.

[The text of the bills, amendments and summaries follow:]

100TH CONGRESS
1ST SESSION

S. 1084

To establish the amount of the costs of the Department of Energy's uranium enrichment program that have not previously been recovered from enrichment customers in the charges of the Department of Energy to its customers.

IN THE SENATE OF THE UNITED STATES

APRIL 23 (legislative day, APRIL 21), 1987

Mr. FORD (for himself and Mr. JOHNSTON) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

---

A BILL

To establish the amount of the costs of the Department of Energy's uranium enrichment program that have not previously been recovered from enrichment customers in the charges of the Department of Energy to its customers.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 161(v) of the Atomic Energy Act of 1954 (42 U.S.C. 2201(v) is amended by inserting after the phrase "over a reasonable period of time: . . ." the following: "*And provided further,* That the Government's costs of providing services under paragraphs A and B of this subsection that have been incurred and not recovered prior to fiscal year

1987 of the United States are hereby determined to be $364,000,000, and such amount shall be recovered in charges for services under paragraphs A and B within a twenty-year period commencing on October 1, 1987, along with interest on the unpaid balance at a rate equal to the average yield on long-term Government obligations as determined by the Secretary of the Treasury on October 1, 1987:".

AMENDMENT NO. 0176
By Ford - Johnston
Bill/Res. No. S. 1084
35 pages

✓

AMENDMENT NO.______________Ex.______Calendar No.__________

Purpose: To redirect the uranium enrichment enterprise of the Department of Energy.

IN THE SENATE OF THE UNITED STATES 100th Cong., 1st Sess.

S. 1084

A bill to establish the amount of the costs of the Department of Energy's uranium enrichment program that have not previously been recovered from enrichment customers in the charges of the Department of Energy to its customers.

Referred to the Committee on Energy and Natural Resources and ordered to be printed

Intended to be proposed by Mr. FORD (for himself and Mr. JOHNSTON)

Viz: At the end of the bill add the following:

Sec. 1. SHORT TITLE -- This Act may be cited as the "United States Uranium Enrichment Act."

Sec. 2. REDIRECTION OF THE URANIUM ENRICHMENT ENTERPRISE OF THE UNITED STATES. -- The Atomic Energy Act of 1954, as amended (42 U.S.C. Section 2011, et seq.) is further amended by inserting at the commencement thereof:

"TITLE I"

and by adding at the end thereof the following:

"TITLE II - UNITED STATES ENRICHMENT CORPORATION

TABLE OF CONTENTS

CHAPTER 1. FINDINGS
Sec. 1101 Findings
CHAPTER 2. DEFINITIONS, ESTABLISHMENT OF CORPORATION, AND PURPOSES
Sec. 1201 Definitions
Sec. 1202 Establishment of Corporation
Sec. 1203 Purposes
CHAPTER 3. CORPORATE OFFICES
Sec. 1301 Corporate Offices
CHAPTER 4. POWERS AND DUTIES OF THE CORPORATION
Sec. 1401 Specific Powers and Duties of the Corporation
Sec. 1402 General Powers of the Corporation
Sec. 1403 Continuation of Contracts, Orders, Proceedings and Regulations
Sec. 1404 Certain Pending Litigation
Sec. 1405 Liabilities
CHAPTER 5. ORGANIZATION, FINANCE AND MANAGEMENT
Sec. 1501 Administrator
Sec. 1502 Delegation
Sec. 1503 Advisory Board
Sec. 1504 Employees of the Corporation
Sec. 1505 Transfer of Property to the Corporation
Sec. 1506 Capital Structure of the Corporation
Sec. 1507 Borrowing

Sec. 1508 Pricing
Sec. 1509 Audits
Sec. 1510 Reports
Sec. 1511 Control of Information
Sec. 1512 Patents and Inventions
CHAPTER 6. LICENSING, TAXATION AND MISCELLANEOUS PROVISIONS
Sec. 1601 Licensing
Sec. 1602 Taxation
Sec. 1603 Miscellaneous Applicability of the Atomic Energy Act
Sec. 1604 Cooperation with Other Agencies
Sec. 1605 Intent

CHAPTER 1. FINDINGS

Sec. 1101. FINDINGS. -- The Congress of the United States finds that:

(a) The enrichment of uranium is essential to the national security and energy security of the United States.

(b) A competitive, well-managed and efficient enrichment enterprise provides important economic benefits to the United States and contributes to a highly favorable foreign trade balance.

(c) A strong United States enrichment enterprise promotes U.S. nonproliferation policies by requiring accountability for U.S.-enriched uranium.

(d) The operation of uranium enrichment facilities must meet high standards for environmental health and safety.

(e) The operation and management of an uranium enrichment enterprise requires a commercial business orientation in order to engender customer support and confidence, and customers, rather than the taxpayers at large, are expected to bear the costs of uranium enrichment services including reasonable profit.

(f) The optimal level of expenditures for the uranium enrichment enterprise fluctuates and cannot be accurately predicted or efficiently financed on an annual basis.

(g) Flexibility is essential to adapt business operations to a competitive marketplace.

(h) The events of the recent past, including the emergence of foreign competition, have brought new and unforeseen forces to bear upon the management and operation of the government's uranium enrichment enterprise.

(i) The present operation of the uranium enrichment enterprise must be changed so as to further the national interest in the enterprise and respond to the competitive demand placed upon it by market forces.

CHAPTER 2. DEFINITIONS, ESTABLISHMENT OF CORPORATION, AND PURPOSES

Sec. 1201. DEFINITIONS. -- For the purpose of this Title:

(a) The term "Secretary" means the Secretary of Energy.

(b) The term "Department" means the Department of Energy of the United States.

(c) The term "Administrator" means the chief executive officer of the United States Enrichment Corporation.

(d) The term "Corporation" means the United States Enrichment Corporation.

(e) The term "Advisory Board" means the appointed members of an official advisory panel appointed by the Secretary.

(f) The term "Commission" means the Atomic Energy Commission, a predecessor agency of the Department.

(g) The term "uranium enrichment" means the separation of uranium of a given isotopic content into two components, one having a higher percentage of a fissile isotope and one having a lower percentage.

Sec. 1202. ESTABLISHMENT OF THE CORPORATION. --

(a) There is hereby created a body corporate to be known as the "United States Enrichment Corporation."

(b) The Corporation shall be established as a wholly-owned government corporation subject to the Government Corporation Control Act, as amended (31 U.S.C. Section 9101, et. seq.), except as otherwise provided herein.

Sec. 1203. PURPOSES. -- The Corporation is created for the following purposes:

(a) To acquire feed material for uranium enrichment, enriched uranium and the Department's uranium enrichment and related facilities.

(b) To operate, and as required by business conditions, to expand and/or construct facilities for uranium enrichment.

(c) To market and sell enriched uranium and uranium enrichment services to: (1) the Department for governmental purposes; and (2) qualified domestic and foreign persons.

(d) To conduct research and development for purposes of identifying, evaluating, improving and testing processes for uranium enrichment.

(e) To operate, as a continuing, commercial enterprise, on a business-like, economic and efficient basis.

(f) To conduct its activities in such manner as to foster and encourage, to the extent practicable consistent with the health and safety of the public and the common defense and security (including consideration of United States policies concerning nonproliferation of atomic weapons and other nonpeaceful uses of atomic energy), the possession by the United States of an appropriate share of the world market for enriched uranium and uranium enrichment services.

(g) To take all other lawful action in furtherance of the foregoing purposes.

CHAPTER 3. CORPORATE OFFICES

Sec. 1301. CORPORATE OFFICES. -- The Corporation shall maintain an office for the service of process and papers in the District of Columbia, and shall be deemed, for purposes of venue in civil actions, to be a resident thereof. The Corporation may establish offices in such other place or places as it may deem necessary or appropriate in the conduct of its business.

CHAPTER 4. POWERS AND DUTIES OF THE CORPORATION

Sec. 1401. SPECIFIC CORPORATE POWERS AND DUTIES. -- The Corporation:

(a) Shall perform uranium enrichment or provide for such enrichment to be performed by others. To the extent it deems necessary or advisable, the Corporation may continue in effect contracts between the Department and persons, obligating such persons to perform uranium enrichment at facilities of the Department.

(b) Shall conduct, or provide for the conduct of, research and development activities related to the isotopic separation of uranium as the Corporation deems necessary or advisable.

(c) May acquire or distribute enriched uranium, feed material for uranium enrichment or depleted uranium in transactions with: (1) persons licensed under Sections 53, 63, 103, or 104 of Title I in accordance with the licenses held by such persons; (2) persons in accordance with, and within the period of, an agreement for cooperation arranged pursuant to Section 123 of Title I; or (3) as otherwise authorized by law.

(d) May (1) enter into contracts with persons licensed under Section 53, 63, 103, or 104 of Title I for such periods of time as the Corporation may deem necessary or desirable, to provide uranium or uranium enrichment services; and (2) enter into contracts to provide uranium or uranium enrichment services in accordance with, and within the period of, an agreement for cooperation arranged pursuant to Section 123 of Title I or as otherwise authorized by law; Provided that comparable services are made available pursuant to Paragraph (1) of this subsection.

(e) Is authorized to sell to the Department on a commercial basis, and without regard to the provisions of 31 U.S.C. Section 1535, such amounts of uranium or uranium enrichment services as the Department may determine from time to time are required: (1) for the Department to carry out Presidential direction and authorizations pursuant to Section 91 of Title I; and (2) for the conduct of other Department programs.

(f) May grant licenses, both exclusive and nonexclusive, for the use of patents and patent applications owned by the Corporation, and establish and collect charges, in the form of royalties or otherwise, for utilization of Corporation-owned facilities, equipment, patents, and technical information of a proprietary nature pertaining to the Corporation's activities.

Sec. 1402. GENERAL POWERS OF THE CORPORATION. -- The Corporation:

(a) Shall have perpetual succession unless dissolved by Act of Congress.

(b) May adopt, alter, and use a corporate seal, which shall be judicially noticed.

(c) May sue and be sued in its corporate name.

(d) May indemnify the Administrator, officers, attorneys, agents and employees of the Corporation for liabilities and expenses incurred in connection with their corporate activities.

(e) May adopt, amend, and repeal bylaws, rules and regulations governing the manner in which its business may be conducted and the power granted to it by law may be exercised and enjoyed.

(f) May acquire, purchase, lease, and hold real and personal property, including patents and proprietary data, as it deems necessary in the transaction of its business, and sell, lease, grant, and dispose of such real and personal property, as it deems necessary to effectuate the purposes of this Title and without regard to the Federal Property and the Administrative Services Act of 1949, as amended. Purchases, contracts for the construction, maintenance, or management and operation of facilities and contracts for supplies or services, except personal services, made by the Corporation shall be made after advertising, in such manner and at such times sufficiently in advance of opening bids, as the Corporation shall determine to be adequate to insure notice and an opportunity for competition: Provided, That advertising shall not be required when the Corporation determines that the making of any such purchase or contract without advertising is necessary in the interest of furthering the purposes of this Title, or that advertising is not reasonably practicable.

(g) With the consent of the agency or government concerned, may utilize or employ the services or personnel of any Government agency or, any State or local government, or voluntary or uncompensated personnel to perform such functions on its behalf as may appear desirable.

(h) May enter into and perform such contracts, leases, cooperative agreements, or other transactions as may be necessary in the conduct of its business and on such terms as it may deem appropriate, with any agency or instrumentality of the United States, or with any state, territory or possession, or with any political subdivision thereof, or with any person, firm, association, or corporation.

(i) May determine the character of and the necessity for its obligations and expenditures, and the manner in which they shall be incurred, allowed, and paid, subject to the provisions of this Title and other provisions of law specifically applicable to Government corporations.

(j) May use monies, unexpended appropriations, revenues and receipts from operations, amounts received from obligations issued and other assets of the Corporation in accordance with Section 1505, without fiscal year limitation, for the payment of expenses and other obligations incurred by the Corporation in carrying out its functions under, and within the requirements of, this Title; and shall not be subject to apportionment under the provisions of Subchapter II of Chapter 15 of Title 31, United States Code.

(k) May settle and adjust claims held by the Corporation against other persons or parties and claims by other persons or parties against the Corporation.

(l) May exercise, in the name of the United States, the power of eminent domain for the furtherance of the official purposes of the Corporation.

(m) Shall have the priority of the United States with respect to the payment of debts out of bankrupt, insolvent, and decedents' estates.

(n) May define appropriate information as "Government Commercial Information" and exempt such information from mandatory release pursuant to 5 U.S.C. subsection 552(b)(3) when it is determined by the Administrator that such information if publicly released would harm the Corporation's legitimate commercial interests.

(o) May request, and the Administrator of General Services, when requested, shall furnish the Corporation such services as he is authorized to provide agencies of the United States.

(p) May accept gifts or donations of services, or of property, real, personal, mixed, tangible or intangible, in aid of any purposes herein authorized.

(q) May execute, in accordance with its bylaws, rules and regulations, all instruments necessary and appropriate in the exercise of any of its powers.

Sec. 1403. CONTINUATION OF CONTRACTS, ORDERS, PROCEEDINGS AND REGULATIONS. --

(a) Except as provided in Section 1401(a), all contracts, agreements, leases, licenses, and privileges afforded to the Department under Title I, including all enrichment services contracts and power purchase contracts shall continue in effect as if the Corporation had executed such contracts, agreements, or leases.

(b) As related to the functions vested in the Corporation by this Title, all orders, determinations, rules, regulations and privileges of the Department shall continue in effect until modified, terminated, superseded, set aside or revoked by the Corporation, by any court of competent jurisdiction, or by operation of law unless otherwise specifically provided in this Title; Provided, however, that Department orders, rules and regulations affecting health, environment and nuclear safety shall continue in effect until modified, terminated, superseded or set aside by the Secretary.

(c) Except as provided in Section 1404, the transfer of functions related to and vested in the Corporation by this Title shall not affect proceedings, judicial or otherwise, relating to such functions which are pending at the time this Title takes effect, and such proceedings shall be continued with the Corporation, as appropriate.

Sec. 1404. CERTAIN PENDING LITIGATION. --

(a) Section 161(v) of Title I shall not apply to the Corporation; Provided That the Corporation shall act in place of the Department for purposes of complying with a final judgment not subject to appeal or petition for certiorari in the proceeding pending before the United States Court of Appeals for the Tenth Circuit in Docket No. 86-1942, concerning the availablity of uranium enrichment services for source or special nuclear materials of foreign origin intended for use in a utilization facility within or under the jurisdiction of the United States.

(b) The Corporation may enter into or continue any contract in accordance with the provisions of this Title without regard to any judgment in the proceeding pending before the United States Court of Appeals for the Tenth Circuit in Docket No. 85-2428, concerning the procedure followed by the Department in setting the terms of certain enrichment services contracts.

Sec. 1405. LIABILITIES. -- Except as provided elsewhere in this Title, all liabilities attributable to operation of the uranium enrichment enterprise while a part of the Department shall remain direct liabilities of the Government of the United States.

CHAPTER 5. ORGANIZATION, FINANCE AND MANAGEMENT

Sec. 1501. ADMINISTRATOR. -- The management of the Corporation shall be vested in an Administrator who shall be appointed by the President, by and with the advice and consent of the Senate. The Administrator:

(a) Shall be the chief executive officer of the Corporation and shall be responsible for the management and direction of the Corporation. The Administrator shall establish the offices, appoint the officers, attorneys, and employees of the Corporation, and define their responsibilities and duties. The Administrator shall appoint other employees and attorneys as may be required to conduct the transaction of the Corporation's business.

(b) Shall serve a term of six years but may be reappointed.

(c) Shall, before taking office, take an oath to faithfully discharge the duties thereof.

(d) Shall have compensation determined by the Secretary, except that compensation shall not exceed Executive Level II as defined in 5 U.S.C. Section 5312.

(e) Shall be a citizen of the United States.

(f) Shall designate an officer of the Corporation who shall be vested with the authority to act in the capacity of the Administrator in the event of absence or incapacity.

(g) Shall be under the supervision of the Secretary.

Sec. 1502. DELEGATION. -- The Administrator may delegate, to other officers, attorneys, or employees, powers and duties assigned to the Corporation in order to achieve the purposes of this Title.

Sec. 1503. ADVISORY BOARD. -- There is hereby established an Advisory Board appointed by the Secretary, which shall consist of five members, one of whom shall be designated as chairman.

(a) The specific responsibilities of the Advisory Board shall be to: (1) review the Corporation's policies and performance and report to the Secretary; and (2) advise the Secretary on any other such matters as he may refer to the Advisory Board.

(b) Except for initial appointments, members of the Advisory Board shall serve five-year terms. Each member of the Advisory Board shall be a citizen of the United States. No more than three members of the Board shall be members of any one political party. Of those first appointed, the chairman shall serve for the full five-year term; one member shall serve for a term of four years; one shall serve for a term of three years; one shall serve for a term of two years; and one shall serve for a term of one year.

(c) Upon expiration of the initial term, each Advisory Board member appointed thereafter shall serve a term of five years. Upon the occurrence of a vacancy on the Board, the Secretary shall appoint an individual to fill such vacancy for the remainder of the applicable term. Upon expiration of a term, a Board member may continue to serve up to a maximum of one year or until a successor shall have been appointed and assumed office, whichever occurs first.

(d) The members of the Advisory Board in executing their duties shall be governed by the laws and regulations regarding conflicts of interest, but exempted from other provisions and authority prescribed by the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2).

(e) The Advisory Board shall meet at any time pursuant to the call of the Chairman and as provided by the bylaws of the Corporation, but not less than quarterly.

(f) The Corporation shall compensate members of the Advisory Board at a per diem rate equivalent to Executive Level 3, as defined in 5 U.S.C. Section 5314, in addition to reimbursement of reasonable expenses incurred when engaged in the performance of duties vested in the Advisory Board. Any Advisory Board member who is otherwise a Federal employee shall not be eligible for compensation above reimbursement for reasonable expenses incurred while attending official meetings of the Corporation.

Sec. 1504. EMPLOYEES OF THE CORPORATION. -- Employees of the Corporation shall be officers and employees of the United States.

(a) The Administrator shall appoint all officers, attorneys, agents and employees of the Corporation as are deemed necessary to effect the provisions of this Title without regard to any administratively imposed limits on personnel. The Administrator shall fix all compensation in accordance with the comparable pay provisions of 5 U.S.C. Section 5301, with compensation levels not to exceed Executive Level II, as defined in 5 U.S.C. Section 5313. The Administrator shall define the duties of all employees and provide a system of organization inclusive of a personnel management system to fix responsibilities and promote efficiency. The Corporation shall assure that the personnel function and organization is consistent with the principles of 5 U.S.C. Section 2301(b) relating to merit system principles. Officers, attorneys and employees of the Corporation shall be appointed, promoted and assigned on the basis of merit and fitness, and other personnel actions shall be consistent with the principles of fairness and due process but without regard to those provisions of Title 5 of the United States Code governing appointments and other personnel actions in the competitive service.

(b) The Administrator shall make appropriate provision for career protection of officers, attorneys and employees of the Corporation and for a pension system applicable to the Administrator, officers, attorneys and employees, except that any Federal employee hired before January 1, 1984, who transfers to the Corporation and who on the day before the date of transfer is subject to the Federal Civil Service retirement system (Subchapter III of Chapter 83 of Title 5, United States Code) may elect to remain within the coverage of such system in lieu of coming within the Corporation's pension system during employment by the Corporation. For those employees electing to remain in the Federal Civil Service retirement system, the Corporation shall withhold pay and shall pay into the Civil Service Retirement and Disability Fund the amounts specified in Chapter 83 of Title 5, United States Code. Employment by the Corporation without a break in continuity of service shall be considered to be employment by the United States Government for purposes of Subchapter III of Chapter 83 of Title 5, United States Code. Further:

(1) Any employee who transfers to the Corporation under this section shall not be entitled to lump sum payments for unused leave under 5 U.S.C. Section 5551, but shall be credited by the Corporation with the unused

annual leave at the time of transfer. During the five-year period commencing on the date of transfer, annual and sick leave shall be earned at the same rates permitted on the day before the date of transfer, and observed official holidays shall be the same as those specified in 5 U.S.C. Section 6103.

(2) An employee who does not transfer to the Corporation and who does not otherwise remain a Federal employee shall be entitled to all the rights and benefits available under Federal law for separated employees, except that severance pay shall not be payable to an employee who does not accept an offer of employment from the Corporation of work substantially similar to that performed by that employee for the Department.

(c) This section does not affect a right or remedy of an officer, employee, or applicant for employment under a law prohibiting discrimination in employment in the Government on the basis of race, color, religion, age, sex, national origin, political affiliation, marital status, or handicap condition.

(d) Officers and employees of the Corporation shall be covered by Chapter 73 of Title 5, United States Code, relating to suitability, security and conduct.

(e) Compensation, benefits, and other terms and conditions of employment in effect immediately prior to the effective date of this section, whether provided by statute or by rules and regulations of the Department or the executive branch of the Government of the United States shall continue to apply to officers and employees who transfer to the Corporation from other Federal employment until changed by the Corporation or Congress in accordance with the provisions of this Title.

(f) The provisions of Sections 3323(a), and 8344 of Title 5, United States Code, or any other law prohibiting or limiting the reemployment of retired officers or employees or the simultaneous receipt of compensation and retired pay or annuities, shall not apply to officers and employees of the Corporation.

Sec. 1505. TRANSFER OF PROPERTY TO THE CORPORATION. -- In order to enable the Corporation to exercise the powers and duties vested in it by this Title --

(a) The Secretary is authorized and directed to transfer without charge to the Corporation all of the Department's right, title, or interest in and to, real or personal properties owned by the Department, or by the United States but under control or custody of the Department, which are related to and materially useful in the performance of the functions transferred by this Title, including but not limited to the following:

(1) production facilities for uranium enrichment inclusive of real estate, buildings and other

improvements at production sites and their related and supporting equipment;

(2) facilities, equipment, and materials for research and development activities related to the isotopic separation of uranium by the gaseous diffusion, atomic vapor laser isotope separation and gas centrifuge technologies;

(3) the Department's stocks of preproduced enriched uranium;

(4) the Department's stocks of feed materials for uranium enrichment except for such quantities as are currently allocated to national defense activities of the Department;

(5) all other facilities, equipment, materials (including depleted uranium and materials in process), processes, patents, technical information of any kind, contracts, agreements, and leases to the extent these items concern the Corporations functions and activities, except those items required for programs and activities of the Department.

(b) The Secretary is authorized and directed to grant the Corporation without charge, to the extent necessary or appropriate for the conduct of the Corporation's activities, licenses to practice or have practiced any inventions or discoveries (whether patented or unpatented), together with the right to use or have used any processes and technical information owned or controlled by the Department.

(c) The Secretary is directed to transfer to the Corporation the unexpended balance of appropriations, and other monies available to the Department inclusive of funds set aside for accounts payable, and accounts receivable which relate to functions and activities acquired by the Corporation from the Department pursuant to this Title, including all advance payments.

(d) The President is authorized to provide for the transfer to the Corporation of the use, possession, and control of such other real and personal property of the United States which is reasonably related to the functions performed by the Corporation. Such transfers may be made by the President without charge as he may from time to time deem necessary and proper for achieving the purposes of this Title.

Sec. 1506. CAPITAL STRUCTURE OF THE CORPORATION. --

(a) The fair market value of assets transferred in accordance with Section 1505, less the amount of liabilities assumed by the Corporation upon the commencement of operation of the Corporation, referred to hereinafter as the "Equity," shall be determined by the Administrator subject to the approval of the Comptroller General of the United States. This determination shall be completed within two years of the date of enactment of this Title.

(b) Upon commencement of operations of the Corporation: (1) all liabilities then chargeable to unexpended balances of appropriations transferred under Section 1505 shall become liabilities of the Corporation; and (2) at such time that decontamination and/or decommissioning of property or equipment transferred in accordance with Section 1505 of this Title may be necessary, the Corporation and the Department shall share the burden of such costs based on the ratio of the separative work that has been produced under the ownership of each party and that is attributable to the property or equipment being decontaminated and/or decommissioned.

(c) The Corporation shall pay into miscellaneous receipts of the Treasury of the United States, if earned, dividends on the Equity.

(d) The Corporation shall repay within a 20-year period the amount of $364 million into miscellaneous receipts of the Treasury of the United States with interest on the unpaid balance from the date of enactment of this Title at a rate equal to the average yield on long-term government obligations as determined by the Secretary of the Treasury on the date of enactment of this Title. The money required to be repaid under this subsection, hereinafter referred to as "Initial Debt," is hereby determined to constitute the sole recovery by the United States of previously unrecovered costs that: (1) have been incurred by the

United States (including the Department) for uranium enrichment activities prior to Fiscal Year 1987 of the United States; and (2) are to be recovered by the Corporation from its customers in its charges for products, materials, and services.

Sec. 1507. BORROWING. -- The Corporation is authorized to issue and sell such obligations as it determines necessary to carry out the purposes of this Title to the Federal Financing Bank in accordance with the provisions of Title 12, Chapter 24, Sections 2281, et. seq., United States Code. The aggregate amount of obligations issued by the Corporation and outstanding at any one time shall not exceed $1,000,000,000.

Sec. 1508. PRICING. -- The Corporation, giving consideration to prevailing business conditions, shall establish prices and charges for its products, materials, and services which in the opinion of the Corporation will secure and maintain the financial position and continuing long-term viability of the Corporation. Prices and other contractual terms for the provision of products, materials, or services by the Corporation shall be established without regard to the provisions of the Administrative Procedure Act, as amended. Prices shall cover, over the long-term, the costs of performing and maintaining corporate functions, including research and development, depreciation of assets, repayment of the Initial Debt and other obligations of the

Corporation, and reasonable profit. The Corporation shall set prices for enriched uranium and uranium enrichment services provided to the Department on the same basis as other customers.

Sec. 1509. AUDITS. -- The financial transactions of the Corporation shall be audited each fiscal year by an independent firm or firms of nationally recognized certified public accountants who shall prepare such audits using standards appropriate for commercial corporate transactions. The fiscal year of the Corporation shall conform to the fiscal year of the United States. The General Accounting Office shall review such audits annually, and to the extent necessary, cause there to be a further examination of the Corporation using standards for commercial corporate transactions. Such audits shall be conducted at the place or places where the accounts of the Corporation are established and maintained. All books, financial records, reports, files, papers, memoranda, and other property of, or in use by, the Corporation shall be made available to the person or persons authorized to conduct audits in accordance with the provisions of this section.

Sec. 1510. REPORTS. -- The Corporation shall prepare an annual report of its activities. This report shall contain: (1) a general description of the Corporation's operations, (2) a summary of the Corporation's operating and financial performance, and (3) copies of audit reports prepared in conformance with Section 1509 of this Title and the provisions of the Government Corporation Control Act, as amended. A copy of the annual report shall be provided to the President, the Secretary and to the Congress. Such reports shall be completed not later than ninety (90) days following the close of each fiscal year and shall accurately reflect the financial position of the Corporation at fiscal year end, inclusive of any impairment of capital or ability of the Corporation to comply with the provisions of this Title.

Sec. 1511. CONTROL OF INFORMATION. --

(a) The term "Commission" shall be deemed to include the Corporation wherever such term appears in Section 141 and Subsections (a) and (b) of Section 142 of Title I.

(b) No contracts or arrangements shall be made, nor any contract continued in effect, under Sections 1401, 1402, 1403 or 1404, unless the person with whom such contract or arrangement is made, or the contractor or prospective contractor, agrees in writing not to permit any individual to have access to restricted data, as defined in Title I, until the Office of Personnel Management shall have made an investigation and report to the Corporation on the character, associations, and loyalty of such individual, and the Corporation shall have determined that permitting such person to have access to restricted data will not endanger the common defense and security.

(c) The restrictions detailed in subsections (b), (c), (d), (e), (f), (g), and (h) of Section 145 of Title I shall be deemed to apply to the Corporation where they refer to the Commission or a majority of the members of the Commission, and to the Administrator where they refer to the General Manager.

(d) To the extent consistent with the other provisions of this section, the Corporation shall make available to the Committee on Energy and Natural Resources of the United States Senate or the Committee on Energy and Commerce of the United States House of Representatives all books, financial records, reports, files, papers, memoranda or other information possessed by the Corporation upon receiving notice of the adoption of a resolution by such Committee requesting such information.

(e) The Corporation shall have no power to control or restrict the dissemination of information other than as granted by this or any other law.

Sec. 1512. PATENTS AND INVENTIONS. --

(a) The term "Commission" shall be deemed to include the Corporation wherever such term appears in Sections 152, 153(b)(1), and 158 of Title I. The Corporation shall pay such royalty fees for patents licensed to it under Section 153(b)(1) of Title I as are paid by the Department under that provision. Nothing in Title I or this Title II shall affect the right of the Corporation to require that patents granted on inventions, made or conceived during the course of research or operations financed by the Corporation, be assigned to the Corporation.

(b) The Department shall notify the Corporation of all reports heretofore or hereafter filed with it under subsection 151(c) of Title I and all applications for patents heretofore or hereafter filed with the Commissioner of Patents of which the Department has notice under subsection 151(d) of Title I or otherwise, whenever such reports or applications involve matters pertaining to the functions or responsibilities of the Corporation in accordance with this Title. The Department shall make all such reports available to the Corporation, and the Commissioner of Patents shall provide the Corporation access to all such applications. All reports and applications to which access is so provided shall be kept in confidence by the Corporation, and no information concerning the same given without authority of the inventor or owner unless necessary to carry out the provisions of any Act of Congress.

(c) The Corporation, without regard for any of the conditions specified in subsection 153(c)(1), (2), (3), or (4) of Title I, may at any time make application to the Department for a patent license for the use of an invention or discovery useful in the production or utilization of special nuclear material or atomic energy covered by a patent when such patent has not been declared to be affected with the public interest under subsection 153(b)(1) of Title I and when use of such patent is within the Corporation's authority. Any such application shall constitute an application under subsection 153(c) of Title I subject, except as specified above, to all of the provisions of subsections 153(c), (d), (e), (f), (g), and (h) of Title I.

(d) With respect to the Corporation's functions under this Title II, Section 158 of Title I shall be deemed to include the Corporation within the phrase, "any other licensee of the Department" in the first sentence thereof and within the phrase "such licensee" in the second sentence thereof.

(e) The Corporation shall not be liable directly or indirectly for any damages or financial responsibility with respect to secrecy orders imposed under 35 U.S.C. Sections 181 through 187.

(f) The Corporation shall not be liable or responsible for any payments made or awards under subsection 157(b)(3) of Title I, or any settlements or judgments involving claims for alleged patent infringement except to the extent that any such awards, settlements or judgments are attributable to activities of the Corporation after the effective date of its incorporation.

(g) The Corporation shall keep currently informed as to matters affecting its rights and responsibilities under

Chapter 13 of Title I as modified by this section and shall take all appropriate action to avail itself of such rights and satisfy such responsibilities. The Department in discharging its responsibilities under Chapter 13 of Title I shall exercise diligence in informing the Corporation of matters affecting the responsibilities and jurisdiction of the Corporation and seeking and following as appropriate the advice and recommendation of the Corporation in such matters.

CHAPTER 6. LICENSING, TAXATION AND MISCELLANEOUS PROVISIONS

Sec. 1601. LICENSING. -- Licensing of enrichment production facilities shall be subject to the provisions contained within this section.

(a) The Corporation and its contractors are hereby exempted from the licensing requirements and prohibitions of Sections 57, 62, 81, 101, or other provisions of Title I to the same extent as the Department of Energy and its contractors are exempt in regard to the Department's own functions and activities. This exemption shall exist until such time that the Corporation implements Nuclear Regulatory Commission requirements for licensing, but in no event shall such implementation extend beyond five years from the issuance of necessary regulations by the Nuclear Regulatory Commission, unless approved by Congress.

(b) Subject to subsection (a) of this section, the Corporation shall not transfer or deliver any source, special nuclear or byproduct materials or production or utilization facilities, as defined in Title I, to any person who is not properly qualified or licensed under the provisions of Title I.

(c) Within 180 days of enactment of this Title, the Nuclear Regulatory Commission shall submit to the Congress a plan for licensing the uranium enrichment production facilities of the Corporation. Regulations for the licensing of uranium enrichment production facilities shall be completed not later than five years from the date of enactment of this Title.

Sec. 1602. TAXATION. -- The Corporation, including its franchises, capital reserves, surplus, security holdings and income shall be exempt from all taxation now or hereafter imposed by the United States, any commonwealth, territory, dependency, or possession thereof, or by any State or political subdivision thereof, except that any real property of the Corporation shall be subject to taxation to the same extent according to its value as other real property is taxed.

Sec. 1603. MISCELLANEOUS APPLICABILITY OF THE ATOMIC ENERGY ACT. -- Any references to the term "Commission" or to the Department in Sections 105(b), 110(a), 161(c), 161(k), 161(q), 165, 188, 221(a), 229, 230, 232 of Title I shall be deemed to include the Corporation.

Sec. 1604. COOPERATION WITH OTHER AGENCIES. -- The Corporation is empowered to use with their consent the available services, equipment, personnel, and facilities of other civilian or military agencies and instrumentalities of the Federal Government, on a reimbursable basis and on a similar basis to cooperate with such other agencies and instrumentalities in the establishment and use of services, equipment, and facilities of the Corporation. Further, the Corporation may confer with and avail itself of the cooperation, services, records, and facilities of state, territorial, municipal or other local agencies.

Sec. 1605. INTENT. -- It is hereby declared to be the intent of this Title to aid the United States Enrichment Corporation in discharging its responsibilities under this Title by providing it with adequate authority and administrative flexibility to obtain necessary funds with which to assure the maximum achievement of the purposes hereof as provided herein, and this Title shall be construed liberally to effectuate such intent."

Sec. 3. NUCLEAR HAZARD INDEMNIFICATION -- The Atomic Energy Act of 1954, as amended, is further amended as follows:

(a) Subsection 11(q) of the Atomic Energy Act is amended by substituting a comma for the period at the end thereof and adding the following: "including the United States Enrichment Corporation."

(b) The first sentence of subsection 170(d) of the Atomic Energy Act is amended to read as follows: "In addition to any other authority the Commission may have, the Commission is authorized until August 1, 1987, to enter into agreements of indemnification with its contractors, the United States Enrichment Corporation, and the contractors of the Corporation for the construction or operation of production or utilization facilities or other activities under contracts for the benefit of the United States involving activities under the risk of public liability for a substantial nuclear incident."

(c) The second sentence of subsection 170(d) of the Atomic Energy Act is amended by substituting for the opening phrase: "In such agreements of indemnification, the Commission may require its contractor..." the following phrase: "In such agreements of indemnification, the Commission may require its contractor, the Corporation or the Corporation's contractor..." at the commencement thereof.

(d) The third sentence of subsection 170(d) of the Atomic Energy Act is amended by deleting the period at the end thereof and adding the following: "or by the United States Enrichment Corporation."

Sec. 4. MISCELLANEOUS PROVISIONS. -- (a) Section 9101(3) of Title 31, United States Code (relating to the definition of "wholly owned Government corporation") is amended by adding at the end the following: "(N) United States Enrichment Corporation."

(b) In subsection 41(a) of the Atomic Energy Act of 1954, as amended, the word "or" appearing before the numeral "(2)" is deleted, a semicolon is substituted for a period at the end of the subsection and the following is added: "or (3) are owned by the United States Enrichment Corporation."

(c) In subsection 53(c)(1) of the Atomic Energy Act of 1954, as amended, the word "or" is inserted before the word "grant" and the phrase "or through the provision of production or enrichment services" is deleted in both places where it appears in such subsection.

(d) Subsection 905(g)(1) of Title II, United States Code, is amended to include "United States Enrichment Corporation" at the end thereof.

Sec. 5. AUTHORIZATION OF APPROPRIATIONS. -- There are hereby authorized to be appropriated to the Secretary of Energy such sums as are necessary to discharge the obligations of the United States arising under this Act.

Sec. 6. SEVERABILITY. -- If any provision of this Act, or the application of any provision to any entity, person or circumstance, shall for any reason be adjudged by a court of competent jurisdiction to be invalid, the remainder of this

Act, or the application of the same shall not be thereby affected.

Sec. 7. EFFECTIVE DATE. -- All provisions of this Act shall take effect 30 days after the taking of office of the Administrator of the United States Enrichment Corporation; Provided, That the Administrator may immediately exercise the management responsibilities of subsection 1501(a) of the Atomic Energy Act of 1954, as amended. In no event shall the effective date of this Act extend beyond 180 days from the date of enactment of this Act.

UNITED STATES URANIUM ENRICHMENT ACT
SUMMARY OF MAJOR PROVISIONS

- Establishes the United States Enrichment Corporation (USEC) as a wholly-owned government corporation for purposes of taking over the uranium enrichment enterprise presently operated by the Department of Energy (DOE).

- Makes USEC generally subject to the Government Corporation Control Act. This Act:

    - requires inclusion of the USEC budget in the President's budget submission;

    - gives Congress the power to make authorized apropriations and require the repayment of capital and dividends;

    - but does not interfere with USEC's otherwise independent power to carry out its affairs (including capital repayment and payment of dividends) without fiscal year limitation.

- Directs USEC to: (1) perform uranium enrichment and sell this service to the Department of Energy and qualified persons; (2) conduct research and development; and (3) operate as a continuing, commercial enterprise on a business-like, economic and efficient basis.

- Gives direction of USEC to an Administrator appointed by the President with the advice and consent of the Senate. The Administrator has the general powers of a chief executive officer, but is subject to the supervision of the Secretary of Energy.

- Creates a five-member Advisory Board appointed by the Secretary. The Board reviews and reports to the Secretary on the policies and performance of USEC.

- Transfers to USEC all DOE property related to uranium enrichment including AVLIS and GCEP technologies.

- Transfers to USEC the unexpended balance of appropriations made to the enrichment program and all liabilities chargeable thereto.

- Transfers to USEC existing enrichment services contracts and power contracts (including those with TVA).

- Sets the Equity of USEC equal to the net fair market value of assets transferred to the Corporation and requires payment into the Treasury of dividends on Equity when earned.

- Sets the previously unrecovered costs of the enrichment program at $364 million and requires this amount to be recovered from enrichment customers with interest over 20 years.

- Gives USEC the ability to borrow up to $1 billion from the Federal Financing Bank.

- Requires USEC to set prices for products, materials, and services that cover, over the long term, the costs of performing and maintaining corporate functions including:

    - research and development

    - depreciation of assets

    - repayment of initial $364 million debt and future borrowings

    - reasonable profit

- Removes various impediments to commercial operation such as requirements for divulgence of business information and use of unwieldy procurement practices.

- Exempts USEC and it subcontractors from Nuclear Regulatory Commistion (NRC) licensing in the same way as DOE and its contractors are presently exempted. Requires NRC to promulgate licensing regulations for USEC within 5 years and requires implementation by USEC within 5 years thereafter.

- Provides for sharing the costs of decontaminating and decommissioning uranium enrichment equipment between USEC and DOE on the basis of separative work that has been performed with the equipment under the ownership of each party.

- Requires USEC to act in place of DOE for purposes of complying with any final judgment in the uranium miners' suit concerning enrichment of foreign source uranium.

- Prevents USEC from being subject to any sequestration order under Gramm-Rudman.

- Provides for nuclear indemnification of USEC and its contractors under Section 170(d) of the Atomic Energy Act.

100TH CONGRESS
1ST SESSION

S. 1100

To authorize and direct the Secretary of Energy to establish a program to provide for reclamation and other remedial actions with respect to mill tailings at active uranium and thorium processing sites.

IN THE SENATE OF THE UNITED STATES

APRIL 28 (legislative day, APRIL 21), 1987

Mr. DOMENICI (for himself, Mr. SIMPSON, Mr. BINGAMAN, and Mr. WALLOP) introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

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A BILL

To authorize and direct the Secretary of Energy to establish a program to provide for reclamation and other remedial actions with respect to mill tailings at active uranium and thorium processing sites.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "Uranium Revitalization and Tailings Reclamation Act of 1987".

FINDINGS AND PURPOSES

SEC. 2. (a) FINDINGS.—The Congress finds that—

(1) the United States uranium industry has long been recognized as vital to United States energy independence and as essential to United States national security, but has suffered a drastic economic setback, including a 90 per centum reduction in employment, closure of almost all mills, more than a 75 per centum drop in production, closure of many mines, and a permanent loss of uranium reserves;

(2) during the remainder of this century approximately 20 per centum of United States electricity is expected to be produced from uranium fueled power reactors owned by domestic electric utilities;

(3) the United States has been the leading uranium producing Nation and holds extensive proven reserves of natural uranium that offer the potential for secure sources of future supply;

(4) a variety of economic factors, policies of foreign governments, foreign export practices, new Federal regulatory requirements, cancellation of nuclear powerplants and Government uranium enrichment policies have caused most United States producers to close or suspend operations over the past five years and have resulted in the domestic uranium industry being found "not viable" by the Secretary of Energy;

(5) at the same time the United States uranium enrichment program has moved from a position of a virtual monopoly of the free world enrichment market to the highest priced enrichment supplier in a competitive market;

(6) reestablishing a viable domestic uranium industry and a competitive domestic enrichment program are essential to:

(A) assure an adequate long-term supply of domestic uranium and enrichment for the Nation's nuclear power program to preclude an undue threat from foreign supply disruptions or price controls,

(B) through foreign sales, aid in the Nation's balance of trade payments, and

(C) assist in our Nation's nuclear nonproliferation efforts through our involvement in the nuclear fuel process,

(7) the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. 7901 et seq.) was enacted to provide for the reclamation and regulation of uranium mill tailings;

(8) the Uranium Mill Tailings Radiation Control Act of 1978 (42 U.S.C. et seq.) did not provide for a comprehensive method of financing reclamation and re-

medial action at active uranium and thorium processing sites;

(9) the owners or licensees of active uranium mills, the States in which active mills are located, the Federal Government, and owner or licensees of civilian nuclear power reactors have each benefited from uranium produced at the active sites, and it is equitable that they share in the cost of reclamation, decommissioning and other remedial action at the active sites. The funding formula contained herein will provide approximately for an equal one-third sharing by the owners or licensees of active uranium mills, the Federal Government, and the owners or licensees of civilian nuclear power reactors, after considering sharing by the States;

(10) the creation of an assured system of financing will greatly facilitate and expedite reclamation and remedial actions at active uranium and thorium processing sites. Financing should be shared on an approximately equal basis by owners or licensees of active uranium mills, the Federal Government, and the owners or licensees of civilian nuclear power reactors with support from the States in which the active sites are located;

(11) reorganization, self-financing and eventual commercialization of the Department of Energy's ura-

nium enrichment program and facilities will improve the ability of the United States to compete with other suppliers, will improve the Nation's balance of trade payments, will assure an adequate long-term supply of domestic enrichment services and will preclude disruptions or excessive enrichment costs.

(b) PURPOSE.—It is the purpose of Congress with this Act to ensure an adequate long-term supply of domestic uranium and enrichment for the Nation's nuclear power program; to re-establish a viable domestic uranium industry and re-establish a competitive domestic enrichment program, and to establish, facilitate, and expedite a comprehensive system for financing reclamation and other remedial action at active uranium and thorium processing sites.

DEFINITIONS

SEC. 3. FOR PURPOSES OF THIS ACT—

(1) the terms "active uranium or thorium processing site" and "active site" mean—

(A) any uranium or thorium processing site, including the mill, containing by-product material for which a license (issued by the Nuclear Regulatory Commission or its predecessor agency under the Atomic Energy Act of 1954, or by a State as permitted under section 274 of such Act (42 U.S.C. 2021)) for the production at such site of any uranium or thorium derived from ore—

(i) is in effect on January 1, 1978;

(ii) is issued or renewed after January 1, 1978; or

(iii) for which an application for renewal or issuance is pending on, or after, January 1, 1978; and

(B) any other real property or improvement on such real property that—

(i) is in the vicinity of such site; and

(ii) is determined by the Secretary, in consultation with the Commission, to be contaminated with residual by-product material.

(2) the term "Administrator" means the Administrator of the Environmental Protection Agency;

(3) the term "by-product material" has the meaning given such term in section 11e.(2) of the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2));

(4) the term "civilian nuclear power reactor" means any civilian nuclear powerplant required to be licensed under section 103 or section 104 of the Atomic Energy Act of 1954 (42 U.S.C. 2133);

(5) the term "Commission" means the Nuclear Regulatory Commission;

(6) the term "Secretary" means the Secretary of Energy;

(7) the terms "source material" and "special nuclear material" have the meanings given such terms in section 11 of the Atomic Energy Act of 1954 (42 U.S.C. 2014);

(8) the term "tailings" means the wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content;

(9) the term "reclamation, decommissioning and other remedial action" includes long and short term monitoring, except for the purpose of determining the date when reclamation, decommissioning, and other remedial action is complete for the purpose of making refunds under section 215. Further, the term "reclamation, decommissioning and other remedial action" shall include mill decommissioning only if the owner or licensee of an active site elects to make the contribution provided for in section 213(b)(1)(C);

(10) the term "United States Usage Requirements" means the requirements for usage of a specified percentage of uranium that has been mined and milled in the United States of all the uranium contained in the aggregate of new fuel assemblies loaded in all civilian nuclear power reactors operated by any one licensee or the licensees owned by one corporation during

the period from July 1, 1987, through December 31, 1987, and any calendar year from 1988 through 2000, on a year-by-year basis, as provided in and subject to the provisions in section 112; and

(11) the phrase "uranium mined and milled in the United States" shall include uranium recovered from uranium deposits in the United States by underground mining, open-pit mining, strip mining, in-situ recovery, leaching, and ion recovery, or recovered from phosphoric acid manufactured in the United States.

TITLE I—URANIUM REVITALIZATION

NEGOTIATIONS TO VOLUNTARILY RESTRAIN URANIUM IMPORTS

SEC. 111. (a)(1) NEGOTIATIONS BEFORE UNITED STATES ORIGIN USAGE REQUIREMENTS.—The President, acting through the United States Trade Representative, shall undertake negotiations with all major uranium producing countries for the purpose of achieving voluntary restraint agreements whereby the uranium that is uranium mined and milled in the United States contained in the aggregate of new fuel assemblies loaded in all domestic civilian nuclear power reactors during the period of July 1, 1987, until December 31, 1987, will not be less than 40 per centum; during the period January 1, 1988, through June 30, 1988, will not be less than 45 per centum; and for the period July 1, 1988, until December 31, 1988, and each calendar year thereafter through December 31, 2000, on a year-by-year basis, will not be less than 50 per centum.

(2) A country shall be considered a major uranium producing country if there has been or likely will be, delivery of uranium mined or produced, in that country into the United States, of three hundred thousand pounds or more of U–308 contained in uranium concentrate, or the equivalent amount of uranium, which has, or likely will be used for fuel in civilian nuclear power reactors during the years 1980 through 2000.

(3) If a country that is not considered a major uranium producing country on or before June 30, 1987, subsequently becomes a major uranium producing country thereafter, then the United States Trade Representative shall undertake negotiations with such country to achieve a voluntary restraint agreement accomplishing the purpose of this section.

(b) ACTION IF VOLUNTARY RESTRAINT AGREEMENTS AKE EFFECT.—If voluntary restraint agreements described n subsection (a) take effect between the United States and he major uranium producing countries, on or before June 30, 987, the United States Trade Representative, with the co- eration of other appropriate Federal agencies, shall moni- r the usage of uranium in domestic civilian nuclear power actors during such period for the purpose of ascertaining if the terms of the agreements are being complied with. The United States Trade Representative shall report annually to the Congress on the results of the monitoring carried out with respect to that interval. Such annual report shall be submitted on or before March 1 of the year following the calendar year for which the report is prepared.

(c)(1) ACTION IF VOLUNTARY RESTRAINT AGREEMENTS NOT ENTERED.—Unless the President, through the United States Trade Representative, has reported to Congress on or before June 30, 1987, that all major uranium producing countries have entered into voluntary restraint agreements with the United States accomplishing the requirements of subsection (a) for the time period July 1, 1987, through December 31, 2000, then the United States Uranium Usage Requirements as provided in section 112(a) shall become effective immediately.

(2) If voluntary restraint agreements entered into under subsection (a) are not complied with for any reason, including, the expiration, cancellation, termination, amendment or modification of such agreements, then the United States Uranium Usage Requirements as provided in section 112(a) shall become effective immediately.

UNITED STATES URANIUM USAGE REQUIREMENT

SEC. 112. (a) IN GENERAL.—If the United States uranium usage requirement becomes effective as provided in section 111(c), then at least the following percentage of uranium contained in the aggregate of new fuel assemblies loaded into all civilian nuclear power reactors operated by any one licensee or the licensees owned by one corporation shall have been mined and milled in the United States, subject to the provisions of subsection (b):

(1) 40 per centum for the period July 1, 1987 until December 31, 1987;

(2) 45 per centum for the period January 1, 1988 until June 30, 1988;

(3) 50 per centum for the period July 1, 1988 until December 31, 1988, and for each calendar year thereafter through December 31, 2000, on a year-to-year basis.

(b)(1) In making the calculation required in section 112(a), uranium that is not mined and milled in the United States included in new fuel assemblies loaded in all civilian nuclear power reactors operated by any one licensee or the licensees owned by one corporation during any calendar year shall not be considered if such uranium was obtained under the terms of a contract for the purchase of uranium executed prior to September 8, 1986, between the licensee or the corporation owning the licensee of such civilian nuclear power reactors and the supplier, including such a contract to which the quantity is fixed but with flexibility as to date of delivery, and including such a contract with a domestic supplier that allows the supplier to select the origin of the uranium delivered: *Provided, however,* That in the case of such a contract under which a domestic supplier has not, prior to September 8, 1986, purchased or contracted to purchase uranium from another supplier, the percentage of uranium supplied in any period that is mined and milled in the United States shall be the same percentage of uranium set forth in subsection (a) for such period. Uranium that is not mined and milled in the United States included in new fuel assemblies loaded into a civilian nuclear power reactor operated by any one licensee or the licensees owned by any one corporation during any calendar year shall be considered in calculating the requirements in subsection (a) if such uranium was obtained under the terms of contract executed on or after September 8, 1986, or obtained under an option which was exercised on or after September 8, 1986, or obtained under a contract executed before September 8, 1986, but that is modified or extended to increase the quantity of foreign origin uranium delivered.

(2) If, as a result of certain foreign origin uranium specified in paragraph (1) not being considered for the purpose of calculating the requirements of subsection (a), the percentage of total uranium contained in the aggregate of new fuel assemblies loaded in any period covered by subsection (a) in all such reactors operated by any one licensee or the licensees

owned by any one corporation that has been actually mined and milled in the United States is less than the uranium usage requirements of subsection (a) for such period, then all uranium loaded during such period into the civilian nuclear power reactors operated by such licensee or licensees, except that not considered as provided in paragraph (1), shall be uranium mined and milled in the United States.

(c) The percentages of uranium mined and milled in the United States shall be determined by dividing the weight of uranium mined and milled in the United States, in the aggregate of new fuel assemblies loaded into all civilian nuclear power reactors during the period January 1, 1988, through December 31, 2000, operated by any one licensee or the licensees owned by any one corporation during a calendar year by the total weight of uranium in the aggregate of new fuel assemblies loaded into such reactors during that year. For the period July 1, 1987, through December 31, 1987, such percentage of uranium mined and milled in the United States, shall be determined by dividing the weight of the uranium mined and milled in the United States, in the aggregate of new fuel assemblies loaded into all civilian nuclear power reactors operated by any one licensee or the licensees owned by any one corporation during such period by the total weight of uranium in the new fuel assemblies loaded into such reactors during such period. For the purpose of this calculation, fuel loadings begun in one calendar year and that are completed in the following year shall be counted in the year that the refueling outage was completed. Uranium weights and origins in the aggregate of new fuel assemblies shall be determined from the uranium weights and origins indicated on the DOE/NRC Form 741 for the new fuel assembly.

SEC. 113. (a) Any licensee and any corporation owning the licensee who operates a civilian nuclear power reactor at any time during the period beginning July 1, 1987, and ending December 31, 2000, with uranium that is not mined and milled in the United States shall be assessed a charge, to be imposed by the Secretary, of $500 per kilogram of uranium loaded in the civilian nuclear power reactors of the licensee or licensees that is not mined and milled in the United States and that is in excess of that which is allowed under section 112(a).

(b) The assessments imposed by the Secretary pursuant to subsection (a) shall be deposited in the Uranium Mill Tailings Fund established under section 212(a).

VIABILITY

SEC. 114. The requirements, contained in section 161v.(B) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2201(v)(B)), that the Secretary, to the extent necessary to assure the maintenance of a viable domestic uranium industry, shall not offer services, in facilities owned by the

Department of Energy, for the production or enrichment of source or special nuclear material of foreign origin intended for use in the United States, and the provisions of section 170B of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2210B), shall be suspended from September 8, 1986, until December 31, 2000.

LICENSEE CERTIFICATION

SEC. 115. The owner or the licensee of each civilian nuclear power reactor must certify to the Secretary of Energy by March 1 of each year that it has met the requirements of this title for the previous year. The certification must include—

(a) the total weight of uranium loaded;

(b) the total weight of uranium mined and milled in the United States which was loaded;

(c) the total weight of uranium mined and milled outside of the United States which was loaded.

GOVERNMENT URANIUM PURCHASES

SEC. 116. (a) After the date of enactment of this Act, the United States of America, its agencies and instrumentalities, shall not enter contracts or orders for the purchase of uranium other than for uranium mined and milled in the United States: *Provided, however,* That this section shall not affect purchases under a contract for delivery of a fixed amount of uranium entered before the date of enactment of this Act, or options exercised for fixed amounts prior to the date of enactment of this Act. After the date of enactment of this Act, natural uranium and the natural uranium component of the enriched uranium from the United States Government-owned stocks and inventories shall not be sold or provided for commercial power application. The use of such stockpiled or inventoried natural uranium and the natural uranium component of the enriched uranium shall be restricted to military or Government research purposes and to those necessary to provide for efficient operation of departmental enrichment facilities, but the current inventories of natural uranium and the natural uranium component of the enriched uranium from United States Government owned stockpile or inventories shall, to the extent practical, not be reduced except for military or Government research purposes.

(b) Notwithstanding subsection (a), the Tennessee Valley Authority shall be subject to the same requirements under this Act as any other licensee operating a civilian nuclear power reactor.

TITLE II

REMEDIAL ACTION PERFORMED BY THE OWNER OR LICENSEE OF ACTIVE SITES

SEC. 211. (a) IN GENERAL.—The owner or licensee of an active site shall select and perform reclamation, decommissioning, other remedial actions, at active sites.

(b) REMEDIAL ACTION TO BE PERFORMED IN ACCORDANCE WITH APPLICABLE STANDARDS.—Any reclamation, decommissioning, or other remedial action performed under subsection (a) by an owner or licensee shall comply with all applicable requirements established pursuant to the Uranium Mill Tailings Radiation Control Act of 1978, as amended or, where appropriate, requirements established by a State that is a party to a discontinuance agreement under section 274 of the Atomic Energy Act of 1954 (42 U.S.C. 2021).

(c) COSTS OF REMEDIAL ACTION TO BE PAID FROM TAILINGS FUND.—The costs incurred by the owner or licensee for reclamation, decommissioning and other remedial action, performed by the owner or licensee under this Act shall be reimbursed under sections 215, 216, and 217 from the Uranium Mill Tailings Fund established in section 212.

(d)(1) The following active sites qualify for reimbursement from the Uranium Mill Tailings Fund in accordance with the terms of this Act:

SITE	ESTIMATED TONS OF MILL TAILINGS
	July 1, 1985
Cotter—Cannon City Mill, Cannon City, CO	2,200,000
UMETCO—Uravan Mill, Uravan, CO	10,300,000
Sohio Western—L-Bar Mill, Seboyeta, NM	2,100,000
United Nuclear—Churchrock Mill, Churchrock, NM	3,500,000
Anaconda—Bluewater Mill, Grants, NM	23,600,000
Quivera Mining—Ambrosia Lake Mill, Grants, NM	33,000,000
Homestake—Grants Mill, Grants, NM	21,800,000
Conoco—Pioneer Nuclear, Conquista Project, Falls City, TX	8,800,000

SITE—Continued	
Chevron Resources—Panna Maria Mill, Hobson, TX	4,600,000
Exxon—Felder Facility, Three Rivers, TX	400,000
Rio Algom—Lisbon Mill, Moab, UT	3,000,000
Atlas—Moab Mill, Moab, UT	10,500,000
Dawn—Ford Mill, Ford, WA	3,000,000
Western Nuclear—Sherwood Mill, Wellpinit, WA	2,900,000
American Nuclear—Gas Hills Mill, Riverton, WY	5,900,000
Pathfinder—Lucky Mc Mill, Riverton, WY	9,500,000
Western Nuclear—Split Rock Mill, Jeffrey City, WY	7,700,000
UMETCO—East Gas Hills Mill, Riverton, WY	9,200,000
Exxon—Highland Mill, Douglas, WY	7,200,000
Rocky Mountain Energy—Bear Creek Mill, Douglas, WY	5,000,000
Pathfinder—Shirley Basin Mill, Shirley Basin, WY	5,800,000
Petrotomics—Shirley Basin Mill, Shirley Basin, WY	6,300,000
Energy Fuels/UMETCO—White Mesa Mill, Blanding, UT	1,900,000
Minerals Exploration—Red Desert, Rawlins, WY	1,000,000
UMETO—Maybell, Maybell, CO	2,000,000
Tennessee Valley Authority—Edgemont, SD	2,000,000

(2) Within one hundred eighty days of the date of enactment of this Act, the Secretary shall determine the actual amounts of mill tailings at each of the active sites listed in paragraph (1) on the date of enactment of this Act, and the dry tons of tailings at each active site listed in section 211(d)(1) the uranium from which was processed for sales to the United States Government, including the Atomic Energy Commission.

No reimbursement for the reclamation, decommissioning and other remedial action performed at a uranium mill tailings site shall be made in accordance with the terms of this Act for an active site not listed in paragraph (1) or for reclamation, decommissioning and other remedial action of mill tailings at a listed active site in excess of the actual amount of tailings determined by the Secretary to exist on the date of enactment under this paragraph.

URANIUM MILL TAILINGS FUND

SEC. 212. (a) ESTABLISHMENT OF URANIUM MILL TAILINGS FUND.—There hereby is established in the Treasury of the United States a separate fund, to be known as the Uranium Mill Tailings Fund (hereinafter referred to as the "Fund"). The Fund shall consist of—

(1) all contributions to the Fund from the States in which active sites located as provided in section 213(a);

(2) all contributions to the Fund from owners or licensees of active sites are provided in section 213(b);

(3) all contributions made to the Fund by the Secretary as provided in section 213(c);

(4) all fees received from owners or operators of civilian nuclear power reactors as provided in section 213(d);

(5) all assessments paid to the Secretary under section 113(a) by a licensee of a civilian nuclear power reactor for failure to comply with the United States Uranium Usage Requirement;

(6) all interest earned on sums in the Fund.

(b) USE OF URANIUM MILL TAILINGS FUND.—The Secretary may, subject to subsection (c), make expenditures from the Fund only for purposes of compliance with this title.

(c) ADMINISTRATION OF URANIUM MILL TAILINGS FUND.—(1) The Secretary of the Treasury, after consultation with the Secretary, shall annually submit to the Congress a report on the financial condition and operation of the Fund during the preceding fiscal year.

(2) The Secretary shall submit the budget of the Fund to the Office of Management and Budget annually along with the budget of the Department of Energy in accordance with chapter 11 of title 31, United States Code. The budget of the Fund shall consist of the estimates made by the Secretary of receipts by and expenditures from the Fund and other relevant financial matters for the succeeding three fiscal years, and shall be included in the Budget of the United States Government.

(3) If the Secretary determines that the Fund contains at any time amounts in excess of current needs, the Secretary shall request the Secretary of the Treasury to invest such amounts, or any portion of such amounts as the Secretary determines to be appropriate, in obligations of the United States—

(A) having maturities determined by the Secretary of the Treasury to be appropriate to the needs of the Fund; and

(B) bearing interest at rates determined to be appropriate by the Secretary of the Treasury, taking into consideration the current average market yield on outstanding marketable obligations of the United States with remaining periods to maturity comparable to the maturities of such investments, except that the interest rate on such investments shall not exceed the average interest rate applicable to existing borrowings.

(4) Receipts, proceeds, and recoveries realized by the Secretary under this section, and expenditures of amounts from the Uranium Mill Tailings Fund, shall be exempt from annual apportionment under the provisions of subchapter 11 of chapter 15 of title 31, United States Code.

(5) The Secretary may make disbursements from the Fund in amounts provided in advance in appropriations acts, which amounts shall be made available until expended.

CONTRIBUTIONS TO THE FUND

SEC. 213. (a) CONTRIBUTIONS BY STATES CONTAINING ACTIVE SITES.—(1) Each State containing an active site or sites may contribute from non-Federal funds to the Treasury of the United States to be deposited in the Fund the sum of $0.10 for each dry ton of tailings, the uranium from which was processed for commercial sales as establish in accordance with subsection 211(d) at an active site listed in section 211(d)(1) within such State whose owner or licensee has elected to participate in reclamation, decommissioning and other remedial action through the Fund.

(2) Such payment shall be made in five equal annual installments commencing January 1, 1990.

(3) If any State containing an active site or sites, whose owner or licensee has elected to participate in reclamation, decommissioning and other remedial actions through the Fund, fails or refuses to make the contributions, or any portion thereof, required by this section, this shall not affect the right of the owner or licensee of an active site in such State to participate in reclamation, decommissioning and other remedial action through the Fund.

(b) CONTRIBUTIONS BY OWNERS OR LICENSEES.—(1) Each owner or licensee of an active site listed in section 211(d)(1) who elects to participate in reclamation, decommissioning, and other remedial action, through the Fund shall contribute to the Treasury of the United States, to be deposited in the Fund—

(A) $2,000,000 per site as to which it is the owner or licensee of which—

(i) $1,000,000 shall be contributed on or before January 31, 1990; and

(ii) $1,000,000 shall be contributed on or before January 31, 1991;

(B) $1 per dry ton for all tons of tailings at such active site, the uranium from which was processed for commercial sales prior to the effective date of the Act of which—

(i) $0.50 per dry ton for all tons of tailings at such active site, the uranium from which was processed for commercial sales prior to the effective date of this Act, shall be contributed on or before January 31, 1992.

(ii) $0.50 per dry ton for all tons of tailings at such active site, the uranium from which was processed for commercial sales prior to the effective date of this Act, shall be contributed on or before January 31, 1993; and

(C) each owner or licensee of an active site listed in section 211(d)(1) who elects to decommission the mill at such site as a part of the reclamation, decommissioning and other remedial action to be undertaken pursuant to the Fund shall contribute an additional $500,000 on or before January 31, 1994.

(c) CONTRIBUTION ON BEHALF OF FEDERAL GOVERNMENT FROM DEPARTMENT OF ENERGY ENRICHMENT SERVICES REVENUES.—(1) There is authorized to be appropriated to the Fund, $300,000,000, to remain available until expended.

(2) Funds authorized under this section shall be contributed to the Fund from the Department of Energy Uranium Enrichment Program revenues. These contributions shall be in lieu of appropriations from the Treasury of the United States.

(3) The Secretary shall transfer funds authorized by this subsection to the Fund as needed to carry out the purposes of this Title.

(4) Any and all obligation borne by commercial customers for the Government's costs incurred prior to August 1, 1986, in the provision of uranium enrichment service activities under section 161v. of the Atomic Energy Act of 1954, as amended, is fully and completely repaid when:

(A) $300,000,000 has been deposited in the Fund under section 402(a)(1); and

(B) $50,000,000 has been deposited in the Treasury of the United States under section 402(a)(2).

(d) CONTRIBUTIONS BY LICENSEES OF CIVILIAN NUCLEAR POWER REACTORS.—(1) Licensees for civilian nuclear power reactors shall contribute into the Fund a fee of $22 per kilogram of uranium contained in fuel assemblies initially loaded into each civilian nuclear power reactor during each of the calendar years 1989 through 1993.

(2) The fee shall apply to fuel on its initial loading into the reactor and not to previously loaded fuel being loaded

again. In calculating the total annual obligation by a licensee, fuel loaded in loadings which are begun in a calendar year and completed in the subsequent year shall be deemed to have occurred in the year in which loading is completed.

(3) The fee from each user so affected will be due on January 31 the following year with the first such payment due on January 31, 1990.

(4) The contribution of this fee for the years 1989–1993 shall constitute the total obligation of licensees of civilian nuclear power reactors for uranium mill tailings reclamation, except to the extent that a user may be the owner or licensee of a uranium mill or as provided by contract executed prior to the effective date of this Act.

(5) Not later than one hundred and twenty days after the date of enactment of this Act the Secretary shall establish procedures for the collection and payment of the fee established by this title.

ELECTION TO PARTICIPATE

SEC. 214. OWNER OR LICENSEE ELECTION TO PARTICIPATE.—The owner or licensee of an active site listed in section 211(d)(1) may elect to perform reclamation, decommissioning and other remedial action through the Fund and be entitled to receive reimbursement under this Act for the cost incurred by such owner or licensee for reclamation, decommissioning and other remedial action performed in connection with the owner's or licensee's active site by notifying the Secretary of such election on or before January 1, 1989. If an owner or licensee makes an election to participate, the notice shall specify whether the owner or licensee elects to have decommissioning undertaken pursuant to the Fund. Such election to participate or not to participate shall be irrevocable.

REIMBURSEMENT OF COSTS INCURRED FOR RECLAMATION, DECOMMISSIONING AND OTHER REMEDIAL ACTION FROM FUND

SEC. 215. (a) IN GENERAL.—The Secretary shall reimburse from the Fund to the owner of licensee of an active site listed in section 211(d)(1) who has elected to participate as provided in section 214, the costs incurred by such owner or licensee for the reclamation, decommissioning and other remedial actions in connection with such site as follows:

(1) From the contributions made on behalf of the Federal Government as provided in section 213(c), such owner of licensee shall be reimbursed an amount equal to the cost of reclamation, decommissioning, and other remedial action at such site multiplied by the percentage which the dry tons of tailings at such site, the uranium from which was processed for sales to the United States Government, including the Atomic Energy Commission, constitutes to the total dry tons of tailings at such active site as determined in section 211(d)(2), but such reimbursement shall not exceed an

amount equal to $4.50 multiplied by the dry tons of tailings at such active site, the uranium from which was processed for sales to the United States Government, including the Atomic Energy Commission.

(2) From any contributions made by a State to the Fund for tailings reclamation at such site, such owner or licensee shall be reimbursed an amount equal to the sum of such contributions.

(3)(A) From the contributions made by the owner or licensee of such active site plus the interest earned thereon, such owner or licensee shall be reimbursed one-third of the cost of reclamation, decommissioning and other remedial action at such site.

(B) Notwithstanding (A), if the contributions made by the owner or licensee of such active site plus interest earned thereon exceed one-third of the cost of reclamation, decommissioning and other remedial action at such site, such excess shall be refunded to such owner or licensee. The payment of such excess shall be considered a refund and not reimbursement. If the contributions made or to be made by the owner or operator of such active site, plus interest earned thereon, is less than one-third of the cost of reclamation, decommissioning and other remedial action at such site, then the amount by which one-third of the cost of reclamation, decommissioning, and other remedial action at such site exceeds the amount of contributions made by the owner or licensee of such active site plus interest earned thereon, shall be borne by the owner or licensee thereof.

(4) From the contributions made by licensees of civilian nuclear power reactors as provided in section 213(d) and interest earned thereon, the owner or licensee of such active site shall be reimbursed the amount by which the cost of reclamation, decommissioning, and other remedial action at an active site exceeds the sum of the amounts reimbursed to the owner or licensee of such active site as provided in paragraph (1), paragraph (2), paragraph (3), and the amounts to be borne by the owner or licensee of such active site as provided in subparagraph (3)(B).

(5) Notwithstanding paragraphs (1) through (4), the owner or licensee of an active site shall also bear, and not be reimbursed for, any amount by which the cost of reclamation, decommissioning and other remedial action at such site exceeds a sum equal to $4.50 multiplied by the dry tons of tailings at such site as determined in section 211(d)(2).

(6) The successor to the owner or licensee of an active site (other than the United States or agency

thereof or a State as provided by law) shall be entitled to credit for contributions made by its precedecessor and interest earned thereon and be entitled to receive any reimbursements or refunds.

(b) OWNER'S OR LICENSEE'S ACCOUNT.—The Secretary shall maintain accounts for each participating owner or licensee to reflect contributions by such owner or licensee, interest deemed earned on such contributions, reimbursements to such owner or licensee from the Fund, and the cost incurred by the owner or licensee for the reclamation, decommissioning or other remedial action in connection with such active site.

(c)(1) ACCOUNTS FOR OTHER CONTRIBUTIONS TO THE FUND.—For the purpose of accounting, two-thirds of the costs incurred by participating owners or licensees at active sites, up to the maximum of $4.50 per dry ton of tailings at such sites as of the effective date of this Act (such two-thirds being $3 per dry ton based upon $4.50 per dry ton of tailings), shall be deemed to have been reimbursed from the Fund out of the portion of the Fund contributed on behalf of the Federal Government by the Department of Energy as provided in section 213(c); (B) the States that have contributed as provided in section 213(a); (C) the licensee of civilian nuclear power reactors as provided in section 213(d); and (D) interest deemed earned upon such contributions. The Secretary shall maintain accounts for each such person or entity making contributions to the Fund, reflecting the time and amount of such contributions, and the interest deemed earned thereon.

(2) The Secretary shall determine as of January 31, 1996, whether the amount remaining in the Fund, other than the amounts contributed by participating owners or licensees of active sites and interest deemed earned thereon, when considered with the $4.50 per dry ton limit on reimbursement, exceeds the total cost reimbursable to the participating owners or licensees of active sites (other than that deemed reimbursed out of such participating owners or licensees contributions and interest deemed earned thereon or to be borne by owners or licensees), where reclamation, decommissioning and other remedial action has not been completed.

(3) If the Secretary determines there is an excess, then the excess shall be refunded as set forth in subsection (d): *Provided, however,* That no amounts contributed to the Fund by the participating owners or licensees of the active sites and interest deemed earned therein shall be refunded to any person or entity other than the owner or licensee making such contribution, or their successors or assigns.

(d) REFUNDS TO CERTAIN CONTRIBUTORS.—The Secretary shall make a determination annually after January 31, 1996, whether an excess as calculated pursuant to subsection

(c) exists in the Fund. If, as of January 31, 1996, and each January 31 thereafter, the Secretary determines that the Fund contains an excess as calculated in subsection (c), then the Secretary shall refund the excess as follows:

(1) first, to the States which have made contributions to the Fund as provided in section 213(a), until such States have been refunded the full amount of their contributions;

(2) the remaining excess, if any, shall be deposited in the Treasury of the United States.

(e) INTEREST DEEMED EARNED.—For the purposes of this Act, the contributions made by any person or entity shall be deemed to have earned interest annually on the contribution from the date made. The appropriate interest rate for each year shall be determined by the Secretary, taking into consideration the average market yield on outstanding marketable obligations of the United States with one year maturity during the year for which calculation is being made: *Provided, however,* That contributions made by any participating owners or licensees of active sites shall be deemed to bear interest during any such year only to the extent that the contributions made by such owner or licensee exceeds one-third of the costs reimbursed out of the Uranium Mill Tailings Fund to such owner or licensee up to that time.

LIMITATION OF REIMBURSEMENT

SEC. 216. (a) $4.50 PER TON LIMIT.—The total reimbursement from the Fund to the owner or licensee of an active site shall not exceed an amount equal to $4.50 multiplied by the dry tons of tailings located at the site as of the effective date of this Act, as determined in accordance with the requirements of section 211(d). Costs in excess of $4.50 per ton shall be borne by the owner or licensee of the active site on its own account outside the Fund.

(b) INFLATION ESCALATION INDEX.—The $4.50 per dry ton multiplier provided in subsection (a) shall be increased annually based upon an inflation escalation index. The Secretary shall determine the appropriate index to apply.

TAILINGS GENERATED AFTER EFFECTIVE DATE OF ACT

SEC. 217. (a) IN GENERAL.—An owner or licensee of an active site who has elected to participate pursuant to Section 214 shall be entitled to reimbursement from the Fund, to the limits provided, for the costs incurred for the reclamation, decommissioning and other remedial action in connection with such active site on the basis of tailings existing at such active site as on the date of enactment of this Act. The participating owner or licensee of an active site shall be responsible on its own account outside the Fund for the costs incurred for the reclamation, decommissioning and other remedial action associated with tailings generated at such active site after the effective date of this Act.

(b) ACTIVE SITES CONTAINING TAILINGS GENERATED BEFORE AND AFTER THE EFFECTIVE DATE OF THIS ACT.—If an active site whose owner or licensee has elected to participate contains tailings generated both before and after the date of this Act, then it shall be assumed that the costs incurred by the owner or licensee for the reclamation, decommissioning and other remedial action in connection with such site were incurred pro rata based upon the dry tons of tailings generated before and after the date of this Act as determined on the basis of the Secretary's findings under section 211(d)(2), unless the Secretary determines that the costs incurred in connection with the tailings generated after the date of this Act were less than would result from the pro rata formula, in which event such lower amount shall be used for the purposes hereof.

THORIUM SITE

SEC. 218. IN GENERAL.—The costs of reclamation, decommissioning, and other remedial action at active thorium sites shall be borne by the licensee or owner, except that the United States shall bear a portion of the costs at any such site if tailings at the site were generated as an incident of sales to the United States, or any of its agencies and instrumentalities. The portion of the costs to be allocated to the United States shall be determined by the ratio of the volume of tailings that were generated as an incident of sales to the United States, or any of its agencies and instrumentalities, to the total volume of tailings at the site. The cost of reclamation of tailings arising from the coproduction of thorium for the United States, or any of its agencies and instrumentalities, and of other products for the commercial market shall be allocated to the United States. The Secretary shall enter into a cooperative agreement with the owner or licensee of the site providing for the payment by the United States of its portion of the cost of reclamation, decommissioning and other remedial action. For the purpose of carrying out the provisions of this section, such funds as necessary are hereby authorized.

MAINTENANCE OF FUND BALANCE

SEC. 219. IN GENERAL.—The Secretary shall manage disbursements from the Fund such that it never is in a deficit on a cash basis. Reimbursements to owners or licensees may be delayed until receipts allow disbursements. In such cases, owners or licensees of active sites will be treated pro-rata where only partial reimbursements can be made.

INTEREST ON COSTS INCURRED

SEC. 220. IN GENERAL.—Reimbursement from the Fund for costs incurred shall include interest at the rate provided in section 215(e) on costs incurred by the participating owner or licensee of an active site from the date a statement for reimbursement of such cost is submitted by the owner or licensee to the Secretary until reimbursement for such cost is made from the Fund.

LIMITATION OF FINANCIAL OBLIGATIONS

SEC. 221. LIMITATION ON FINANCIAL OBLIGATION OF ACTIVE SITE OWNERS AND LICENSEES AND LICENSEES USING SOURCE MATERIAL OR SPECIAL NUCLEAR MATERIAL FOR A CIVILIAN NUCLEAR POWER REACTOR TO GENERATE ELECTRICAL ENERGY.—The contributions made and work performed by the owners or licensees of the active sites and the contributions made and fines paid by persons using source material or special nuclear material for a civilian nuclear power reactor to generate electrical energy shall be the sole liability and obligation imposed under Federal laws in connection with the reclamation, decommissioning and other remedial action at active uranium and thorium sites: *Provided, however,* That nothing herein contained shall affect the obligation of every owner or licensee to provide for such long-term care or other reclamation requirements as are provided in the Uranium Mill Tailings Radiation Control Act, the regulations of the Nuclear Regulatory Commission thereunder, and the regulations of the Environmental Protection Agency thereunder.

RECLAMATION ALREADY UNDERTAKEN

SEC. 222. IN GENERAL.—The owner or licensee of a participating active site who has undertaken reclamation, decommissioning and other remedial action at such site prior to the effective date of the Act shall be entitled to reimbursement for the cost thereof as if the work was done after the effective date hereof if such work, including disposal work, was accomplished in order to comply with the standards under section 211. The timing of such reimbursement shall be subject to the management of the Fund as specified in section 219. An owner or licensee of an active site which has elected to participate in the Fund and has performed reclamation work prior to the effective date of the Act may have any sums to which it is entitled to be reimbursed credited against any sum it is required to contribute. The Secretary shall determine whether work performed at a site prior to the effective date of this Act was accomplished in order to comply with the standards under section 211.

SECRETARY'S AUTHORITY TO MAKE REGULATIONS AND REIMBURSEMENTS

SEC. 223. IN GENERAL.—The Secretary shall adopt and issue regulations to accomplish the purposes of this title and shall review statements by participating owners or licensees for reimbursement from the Fund of costs incurred for reclamation, decommissioning and other remedial actions. Any such statement for reimbursement found appropriate shall be approved by the Secretary and reimbursement therefore shall be made from the Fund.

ATOMIC ENERGY ACT OF 1954

Sec. 224. Standards and Instructions for Bonding, Surety, or Other Financial Arrangements, Including Performance Bonds.—Section 161x. of the Atomic Energy Act of 1954 (42 U.S.C. 2201(x)) is amended by inserting after "ensure" in the matter preceding paragraph (1) the following: ", for the share of costs for which the licensee is responsible".

TITLE III

UTILITY SERVICES CONTRACT

Sec. 301. The Department of Energy's Utility Services Enrichment Contract is hereby approved, except the Department is precluded from charging for the selection of variable tails assay option between the 0.2 per centum and the 0.3 per centum range authorized by contract. Congress recognizes that such contract properly reflects the relevant criteria for the Department of Energy providing enrichment services.

TITLE IV—URANIUM ENRICHMENT

Sec. 401. Pricing and Recovery of Costs.—(a) Clause 161 v. (iii) of the Atomic Energy Act of 1954, as amended, is amended to read as follows:

> "(iii) any prices established under this subsection shall be on the basis of, as the first priority, the acquisition and retention of the maximum attainable share of domestic and foreign sales of enrichment services; and,

as a subordinate priority, the recovery of the Government's costs over a reasonable period of time:".

(b) Unrecovered Government costs under section 161 v. of the Atomic Energy Act of 1954, as amended, are hereby declared to be $350,000,000 on August 1, 1986.

(c) Any and all obligation borne by commercial customers for the Government's costs incurred prior to August 1, 1986, in the provision of uranium enrichment service activities under section 161 v. of the Atomic Energy Act, as amended, is fully and completely repaid when;

(1) $300,000,000 has been deposited in the Fund under section 402(a)(1); and

(2) $50,000,000 has been deposited in the General Fund of the Treasury of the United States under section 402(a)(2).

SEC. 402. REVENUES.—(a)(1) The Secretary shall deposit in the Fund under section 213(c) any revenues in excess of expenditures received for provision of uranium enrichment service activities under section 161 v. of the Atomic Energy Act of 1954, as amended, until the total of all such deposits reaches $300,000,000.

(2) When $300,000,000 has been deposited in the Uranium Mill Tailings Fund under paragraph (1), the Secretary thereafter shall deposit in the Treasury of the United States all revenues in excess of expenditures received for provision

of uranium enrichment service activities under section 161 v. of the Atomic Energy Act of 1954, as amended.

(b) Deposits under subsection (a) shall be credited against any Government cost of providing such uranium enrichment service activities that is unrecovered by revenues received for such service activities.

(c)(1) If revenues received in any fiscal year beginning after August 1, 1986, for provision of the service activities referred to in subsection (a) are less than 95 per centum of the Government's costs for provision of such activities in such fiscal year, the Secretary shall submit to Congress on or before the first day of February of the next fiscal year a report setting forth alternative plans for full recovery over a reasonable period of time of the Government's costs for provision of such service activities.

(2) Any report submitted under paragraph (1) shall be accompanied by the Secretary's recommendations, if any, for Congressional action and shall include with respect to each alternative plan—

(A) detail sufficient to describe the implementation of the plan;

(B) identification of the changes in law necessary to authorize the plan;

(C) an analysis of the impact of the plan on the sales of enrichment services by the United States; and

(D) an analysis of the impact of the plan on the reliability of supply of uranium enrichment services at competitive prices for existing and potential domestic and foreign customers.

(3) Any plan under this subsection shall be effective only if enacted into law.

SEC. 403. REPORT.—(a) Not later than one year after the date of the enactment of this title, the President shall submit to Congress a full and complete report on alternative methods of managing the uranium enrichment enterprise, including, but not limited to, the establishment of a corporate body to—

(1) own or lease the existing gaseous diffusion plants and other enrichment facilities owned by the United States;

(2) operate such facilities and market enrichment services to existing and potential domestic and foreign customers; and

(3) assume other appropriate functions and obligations of the United States uranium enrichment enterprise.

(b) Each alternative method presented in the report under subsection (a) shall—

(1) assure the continued reliable supply of enrichment services to the domestic and international markets at competitive prices without Federal subsidies;

(2) protect the public health and safety and the environment;

(3) provide a stable, long-term strategy for the uranium enrichment enterprise including stable operation of the gaseous diffusion plants and other enrichment facilities currently owned by the United States; and

(4) advance the trade, foreign policy and nuclear nonproliferation objectives of the United States.

TITLE V—SEPARABILITY OF PROVISIONS

SEC. 501. IN GENERAL.—If any provision of this amendment, or the application of such provision to any person or circumstance, is held invalid, the remainder of this amendment, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby.

TITLE VI—EFFECTIVE DATE

SEC. 601. The provisions of any amendments made by this Act shall become effective upon the expiration of the sixty-day period following the date of enactment of this Act, unless otherwise provided.

AMENDMENT NO. ___ CALENDAR NO. ___

Purpose:

IN THE SENATE OF THE UNITED STATES -- 100th Cong., 1st Sess.

S. ___

To authorize and direct the Secretar
program to provide for reclamation a
respect to mill tailings at active u
sites.

Referred to the Committee on ________
ordered to be p

Ordered to lie on the table

AMENDMENT NO. 0177

By Domenici (4 others)

Bill/Res. No. S.1100

Amendment intended to be proposed by M [illegible], Mr. Simpson,
Mr. Bingaman, Mr. Wallop)

Viz:

In Section 213 (a)(2) strike "1990" and insert "1991".

In Section 213 (b)(1)(A)(L) strike "1990" and insert "1991".

In Section 213 (b)(1)(A)(ii) strike "1991" and insert "1992".

In Section 213 (b)(1)(B)(i) strike "1992" and insert "1993".

In Section 213 (b)(1)(B)(ii) strike "1993" and insert "1994".

In Section 213 (b)(1)(c) strike "1994" and insert "1995".

In Section 213 (d)(1) strike "1989 through 1993" and insert "1990 through 1994".

In Section 213 (d)(3) strike "1990" and insert "1991".

In Section 213 (d)(4) strike "1989" through "1993" and insert "1990" through "1994".

In Section 215 (c)(2) strike "1996" and insert "1997".

In Section 215 (d) strike "1996" wherever it appears and insert in lieu thereof "1997".

Strike Section 221 and renumber the following Sections accordingly.

In Section 301 strike "'S Utility Services Enrichment Contract is hereby approved, except the Department" and "Congress recognizes that such contract properly reflects the relevant criteria for the Department of Energy providing enrichment services."

Strike Title IV and insert a new Title as follows:

Title IV

Uranium Enrichment

Declaration of Policy

Sec. 401. (a). Statement of Policy - The Congress declares that there is a need to establish a government and private ownership corporation with the intent of eventual commercialization for uranium enrichment to

(1) Assure the continued reliable supply of enrichment services with competitive pricing;

(2) Carry out the responsibility with respect to uranium enrichment for government and commercial use;

(3) Provide public with fair compensation for natural resources and facility usage.

(4) Stimulate and assist in development of a private enterprise uranium enrichment management capability;

(5) Protect public health and safety and the environment with respect to the Corporations' activities;

(6) Provide a stable long-term strategy for the uranium enrichment with minimal political and institutional interventions;

(7) Advance U.S. non-proliferation objectives, including confirmation of the reliability of the United States as a supplier of materials and services.

(b) Purposes - It is therefore declared to be the purpose of Congress in this Act to establish a Government and private ownership corporation to

(1) act as agent for the Government in reference to domestic and foreign sale of seperative work units;

(2) serve as managing agent in establishing operational requirement for enrichment of uranium for government and commercial purposes in existing gaseous diffusion enrichment and related facilities;

(3) contract with the Government to obtain rights to associated feed material and appropriate stockpiles of enriched uranium sufficient to permit the efficient, economic performance of all existing and future enrichment contracts for government and commercial purposes with domestic and foreign customers and suppliers;

(4) construct, purchase, lease, license, or otherwise provide for facilities using conventional or advanced technologies to provide uranium enrichment services for government and commercial purposes, including centrifuge enrichment and advanced isotope separation;

(5) operate such facilities in support of contracts for furnishing enrichment and related nuclear fuel supply services to domestic and foreign customers;

(6) conduct research, development and testing on advanced techniques for enrichment services for commercial use.

Establishment

Sec. 402. (a). There is established in accordance with the provisions of this section, a Government and private ownership uranium enrichment services corporation to be known as the "Enrichment Services Corporation" (in this Act referred to as the "Corporation").

(b) The Secretary of the Department of Energy shall be deemed as the incorporator of the Corporation and shall incorporate the Corporation within 180 days of the effective date of this Act, and serve as an acting Chairman of the Board of the Directors for a period of not more than 60 days after the date of incorporation of the Corporation.

(c) Except as otherwise provided in the bill, the Corporation shall be incorporated under, and be subject to the provisions of, the District of Columbia Business Corporation Act as amended from time to time. The headquarters of the Corporation shall reside in the District of Columbia, however, the Corporation may establish offices elsewhere in the United States as determined by the Board of Directors of the Corporation. The Corporation is deemed to be a resident of the District of Columbia.

(d) There are hereby transferred to the Corporation all uranium enrichment functions of the Secretary of Energy.

Board of Directors

Sec. 403. (a)(1) The powers of the Coporation shall be vested in the Board of Directors, except those functions, powers, and duties vested in the Chairman by or pursuant to this Act.

(2) The Board of Directors shall consist of five directors:

(A) The Chairman and two other directors with appropriate business experience shall be appointed by the President, by and with the advice and consent of the Senate within 60 days after the incorporation.

(B) Two non-government directors shall be elected by the owners of the Corporation preferred stock after the sale of at least $100 million of the gross sales price of preferred stock;

(C) No member of the Board may have any employment or other direct financial relationship with the Corporation;

(D) Except the Chairman, all directors are on part-time basis.

(b) Terms of Office - The terms of office of the Chairman shall be 5 years. The terms of office of the other two directors appointed by the President shall be designed at the time of appointment to be at the end of second and third year. The terms of non-government directors shall be at the end of the fourth and fifth year. Successors to members of such Board shall be appointed or elected in the same manner as the original members but with 5 year terms and these directors may succeed themselves.

(c) Before assuming office, each Director shall take an oath faithfully to discharge the duties thereof. All Directors shall be citizens of the United States.

(d) The Board of Directors shall meet at any time pursuant to the call of the Chairman and as may be provided by the bylaws of the Corporation, but not less than quarterly. A majority of the Board of Directors shall constitute a quorum, and any action by the Board of Directors shall be effected by majority vote of all members of the Board of Directors. The Board of Directors shall adopt necessary or appropriate, and may from time to time amend, such bylaws as are necessary for the proper management and functioning of the Corporation.

Officers and Employees

Sec. 404. (a) The Board shall appoint a chief executive officer of the Corporation, who shall act upon the majority of votes of the Board on major issues and shall be responsible for the management of the Corporation.

(b) The Board of Directors shall--

(1) establish the offices and appoint the officers of the Corporation (including a General Counsel and Treasurer) and define their duties;

(2) fix the compensation of individual officer positions and categories of other employees of the Corporation in consistence with compensations for comparable corporations.

(3) provide a system of organization to fix responsibility and promote efficiency.

(4) provide an initial business plan within 60 days after appointment, and annual business plan thereafter in the annual report.

(c) Except as specifically provided in this Act, Directors¢ officers, and employees of the Corporation shall not be deemed as Federal employees.

(d) No political test or qualification shall be used in selecting, appointing, promoting, or taking other personnel actions with respect to officers, agents, and employees of the Corporation.

(e) The Chief Executive Officer shall appoint and terminate such employees as may be necessary for the transaction of the Corporation's business. The Board shall make appropriate provision for career protection of officers and employees of the Corporation and for a pension system applicable to the Chairman and officers and employees of the Corporation, except that any individual already covered by the Federal Civil Service retirement system at the commencement of their service with the Corporation may elect to remain within the coverage of such system in lieu of coming with the Corporation's pension system.

General Powers and Duties

Sec. 405. (a) In carrying out the provisions of this Act, the Corporation shall have the power, consistent with the provisions of this Act to:

(1) adopt, alter, and rescind bylaws and adopt and alter a corporate seal, which shall be judicially noticed;

(2) enter into contracts with persons licensed under section 53, 63, 103 or 104 or as otherwise authorized by law for such periods of time as the Corporation may deem necessary or desirable to provide for enriching uranium by the Corporation; and enter into contracts to provide for enriching uranium by the Corporation in accordance with and within the period of an agreement for cooperation arranged pursuant to section 123 of the Atomic Energy Act of 1954 as amended or as otherwise authorized by law.

(3) acquire and hold such real and personal property as it deems necessary or appropriate in the exercise of its responsibility under this Act.

(4) sue and be sued, in its Corporate name and to complain and defend in any court of competent jurisdiction;

(5) enter into long-term contracts to procure any supply, services, and property.

(6) subject to section 404, select, employ, and fix the compensation (including, without limitation, pension plans, health benefits, incentive compensation plans,

paid vacation, sick leave, and other fringe benefits) of such officers, employees, attorneys, and agents as shall be necessary for the transaction of the business of the Corporation;

(7) make provision for and designate such committees, and the functions thereof, as the Board of Directors may deem necessary or desirable;

(8) indemnify and provide insurance for Directors and officers of the Corporation, as the Board of Directors may deem necessary or desirable;

(9) determine and prescribe the manner in which obligations of the Corporation shall be incurred and its expenses allowed an paid;

(10) obtain the services and fix the compensation of experts and other personnel in consistence with market rates.

(11) to use the United States mails on the same terms and conditions as the executive departments of the United States Governments; and

(12) exercise all other lawful powers necessarily or reasonably related to the establishment of the Corporation, carry out the provisions of this Act and the exercise of its powers, purposes, functions, duties, and authorized activities.

(13) have such power as may be necessary or appropriate for the exercise of the powers herein specifically conferred upon the Corporation and all such powers as are customarily in corporations including but not limiting mortgage, pledge encumber, coverture and participate with respect to its property and revenues.

(14) receive the unexpended balance of appropriations of the Department, other moneys available to the Department, and accounts receivable which relate to functions, and activities acquired by the Corporation from the Department pursuant to this title.

(b) Duties - In addition to its duties and responsibilities under other provisions of this Act, the Corporation shall--

(1) assume contracts between the Department of Energy and persons obligating such persons to enrich uranium in Federally owned GDP and provide oversight for management and inventory policy;

(2) .conduct the uranium enrichment facility expansion program and arrange for the operating of such facilities including GCEP or other advance techniques;

(3) conduct research and development and testing activities relating to uranium enrichment as the Corporation deems necessary or advisable.

(4) enrich uranium for the Department of Energy on a commercial basis in such amounts as requested and reimbursed by the Department of Energy.

(5) Make available to the President, and appropriate Committees of the Congress all studies, data and other information acquired or developed by the Corporation except security-related information or information deemed confidential by the Corporation.

(c) Investment of Funds. Uncommitted funds of the Corporation shall be kept in cash on hand or on deposit, or invested in obligations of the United States or guaranteed thereby, or in obligations, participations, or other investments which are lawful investments for fiduciary, trust, or public funds.

(d) Exemption from Taxation. The Corporation including its capital reserves, surplus, security holdings, and income shall be exempt from all taxation now or hereafter imposed by the United States, any commonwealth, territory, dependency, or possession thereof, or by any State or political subdivision thereof, except that any real property of the Corporation shall be subject to taxation to the same extent according to its value as other real property is taxed.

(e) Annual Report. The Corporation shall transmit to the Congress and the President, not later than 90 days after the end of each fiscal year, a comprehensive and detailed report on all activities of the Corporation during the preceeding fiscal year. Each such report shall include (1) the Corporation's statement of specific and detailed objectives for the activities and programs conducted and assisted under this Act; (2) statements of the Corporation's conclusion as to the effectiveness of such activities and programs in meeting the stated objectives and the purposes of this Act; (3) recommendations with respect to any legislation or administrative action which the Corporation deems necessary or desirable; (4) a statistical compilaton of the obligations issued under this Act; (5) a summary of outstanding problems confronting the Corporation, in order of priority; (6) all other information required to be submitted to the Congress pursuant to any other provision of this Act; and (7) the Corporation's projections and plans for its activities and programs during the next three fiscal years. The specificity and detail of information to be provided shall be consistent with current standard business practices in Federal and public filings.

(f) Budget - The receipts and disbursements of the Corporation in the discharge of its functions shall not be included in the totals of the budget of the United States Government, and shall be exempt from any annual expenditure and net borrowing (budget outlays) limitations imposed on a budget of the United States Government. The Chairman of the Corporation shall transmit annually to the Congress a budget for program activities and for administrative expenses of the Corporation. The Chairman shall report annually to the Congress the amount of net borrowing of the Corporation, which would be included in the totals of the budgets of the United States Government, if the Corporation's activities were not excluded from those totals as a result of this section.

Patents

Sec. 406. (a) The title to the patent of any invention made or conceived in the course of conducting research and development by the Corporation or under contract with the Corporation shall vest in the Corporation. The Corporation shall have the right to license the patent on a nonexclusive basis.

(b)(1) The Corporation may grant a nonexclusive license for the use of any invention for which it holds the patent but it may not grant an exclusive or partially exclusive license except as provided in paragraph (2).

> (2) The Corporation is authorized to grant an exclusive or partially exclusive license for the use of any invention for which it holds the patent to a responsible applicant or applicants, upon terms reasonable under the circumstances, on the basis of competitive bids and following an opportunity for a hearing, upon notice in the Federal Register thereof to the public, only when, in the judgment of the Board of Directors, such exclusive or partially exclusive license in necessary to assure substantial utilization of such invention within a reasonable time.

(c) Each exclusive or partially exclusive license for the use of an invention granted under subsection (b) shall contain such terms and conditions as the Corporation may determine to be appropriate for the protection of the interests of the United States and the general public, including provision for the Corporation, commencing two years after the grant of a license pursuant to subsection (b), to terminate such license if (1) it has not been applied to the commercialization of domestic energy resources or (2) steps have not been taken as necessary to assure substantial utilization of such invention within a reasonable time.

(d) The United States Government shall have a royalty-free, nonexclusive license to any invention in which the Corporation owns title or reserves a license pursuant to subsection (a). The Corporation may assign title to any invention in which it has the title to the United States Government.

Obligations Authority

Sec. 407. (a) General. To carry out the purposes of this Act¢ the Corporation is authorized to issue bonds, debentures, trust certificates, securities, or other obligations and to engage in other financing techniques or provide for profit sharing or other participation mechanisms or structures (herein cited as "obligations") in accordance with this section. Such obligations shall have such maturities and bear such rate or rates of interest as are determined by the Corporation with the approval of the Secretary of the Treasury. Such obligations shall be redeemable at the option of the Corporation prior to maturity in the manner stipulated in each such obligation, and may be purchased by the Corporation in the open market at a price which is reasonable.

(b) Any person may purchase preferred stock of the Corporation, and may hold or dispose of such stock, except that no foreign person may hold a greater percent of the outstanding stock than is permissible under the Atomic Energy Act of 1954 as amended.

(c) Maximum Obligational Authority. Except as otherwise provided in the last sentence of this subsection, the aggregate amount of obligations of the Corporation issued under this section which may be outstanding at any one time shall not exceed $3,500,000,000.

(d) Validity. No obligation issued by the Corporation under this section shall be terminated, canceled, or otherwise revoked, except in accordance with lawful terms and conditions prescribed by the Corporation. Such an obligation shall be conclusive evidence that it is in compliance with this section, has been approved, and is legal as to principal, interest, and other terms. An obligation of the Corporation shall be valid and incontestable in the hands of a holder, except as to fraud, duress, mutual mistake of fact, or material misrepresentation by or involving such holder.

(e) The Secretary of the Treasury. If at any time the moneys available to the Corporation are insufficient to discharge its responsibilities, the Corporation shall issue notes or other obligations to the Secretary of the Treasury. Such obligations shall bear interest at a rate to be determined by the Secretary of the Treasury taking into consideration the current average market yield on outstanding marketable obligations of the United States of comparable maturities during the month preceding the issuance of such obligations. The Secretary of the Treasury is authorized and directed to purchase any such obligations and for such purpose is authorized to use as a public debt transaction the proceeds from the sale of any securities issued under the Second Liberty Bond Act, as amended. The purposes for which securities may be issued under such Act are extended to include any purchase or notes or other obligations issued under this subsection. At any time, the Secretary of the Treasury may sell any such obligations, and all sales, purchases, and redemptions of such obligations by the Secretary of the Treasury shall be treated as public debt transactions of the United States.

(f) Lawful Investments. All obligations issued by the Corporation shall be lawful investments and may be accepted as security for all fiduciary, trust, and public funds, the investment or deposit of which shall be under the authority and control of the United States or any officer or officers thereof. All such obligations issued pursuant to this section shall be exempt securities within the meaning of laws administered by the Securities and Exchange Commission.

Repayment of Prior Costs and Pricing

Sec. 408. (a) Title to existing gaseous diffusion enrichment facilities will remain in the Government.

(1) The Corporation shall be required to compensate fairly and reasonably the United States for any property sold to the Corporation by the United States.

(2) Section 161(v) of the Atomic Energy Act of 1956 as amended is hereby amended by deleting the words in the following phrase and beyond "any prices established under this subsection shall be on a basis of recovery of the Government's costs over a reasonable period of time," and insert in lieu thereof with "any price established under this subsection shall be solely determined by the Enrichment Services Corporation only. The prior unrecovered Government costs to be paid for by the commercial customers shall be $350,000,000. The said amount shall repay fully and completely any and all obligation borne by the commercial customers for costs incurred by the uranium enrichment program prior to FY 1986."

(3) Any and all obligation borne by commercial customers for the Government's costs incurred prior to August 1, 1986, in the provision of uranium enrichment service activities under section 161 v. of the Atomic Energy Act, as amended, is fully and completely repaid when;

(A) $300,000,000 has been deposited in the Fund under section 212; and

(B) $50,000,000 has been deposited in the General Fund of the Treasury of the United States.

(b)(1) The Corporation shall establish prices for products, materials and services that the Corporation contracts to supply to domestic and foreign customers for enrichment and such other related activities as the Corporation may undertake. Such prices shall be established sufficient to provide for all the Corporation's estimated operation and maintenance costs, including but not limited to the costs of contracted services, research and development, interest payments, payments to the Treasury as specified in sec. 409 (b), appropriate reserve accounts, payment in lieu of taxes and other necessary costs and a return on the investment of the holders of the preferred stock of the Corporation, or as otherwise determined by the Board.

(2) The prices shall reflect the objective of this Act to stimulate and assist in the development of a private uranium enrichment enterprise and that prices for foreign users can reflect an appropriate surcharge or reduction as determined by the Corporation, consistent with the policy objectives of the United States and applicable law.

Enrichment

Sec. 409. (a) The Corporation shall be authorized to operate the existing gaseous diffusion enrichment facilities for domestic and foreign commercial purposes, consistent with United States military needs. The Government shall assign its rights and obligations under existing contracts with customers, suppliers, and other entities to the Corporation to permit the Corporation to act as agent for the Government for enrichment services in existing gaseous diffusion facilities for domestic and foreign commercial purposes and to meet the objectives of this Act. The Corporation shall enter into contracts with the Government which shall provide the Corporation with rights of access to and use of appropriate inventories of enriched uranium and feed materials and to other facilities, patents and technical information. The Government shall retain title and control of enriched uranium and feed material needed for all military purposes including a strategic stockpile.

(b) The Corporation shall make annual, reasonable payments, which are to be negotiated by the Corporation with the Secretary of Energy, for the rights of access to and use of appropriate uranium enrichment facilities and for the use of feed stocks. Such payments may be determined by users' fees, surcharge of SWUs, or other appropriate means. Government users of the Corporation's goods and services shall be charged comparable rates for such goods and services as commercial users.

(c) The Corporation shall be authorized to construct, to acquire by lease, or to contract the use and management of the Government's centrifuge enrichment and advanced isotope separation facilities.

(d) The Corporation shall act as the domestic and international agent of the United States Government in connection with the sale of separative work units. Sales shall be made at times and at prices deemed acceptable in the sole discretion of the Corporation, subject to the provisions of Sec. 408.

(e) The Corporation shall conduct its activities (including entering into long-term contracts) in a manner so as to assure reliability of fuel supply for civilian nuclear power reactors and other policy objectives, including a secure energy supply for the United States, energy conservation, and an appropriate share for the U.S. of the world uranium enrichment market. The

Corporation is authorized to conduct research and development programs, including centrifuge and advanced isotope separation processes for commercial applications. The Corporation may conduct research and development programs in its own facilities, using established Government facilities or private industry, or otherwise. The Corporation shall support U.S. foreign policy goals, including non-proliferation.

(f) The Corporation shall utilize the services of private industry to the maximum extent consistent with fulfillment of its responsibilities. The Corporation shall conduct all its activities so as to foster and encourage, consistent with other statutory objectives, assumption by private enterprise of full responsibility for uranium enrichment as soon as economically justified as specified in Sec. 414.

(g) Contracts entered into by the Corporation shall provide for charges with a schedule of payments that would cover costs of the Corporation and for such advance payments for services as the Corporation deems proper.

(h) The Corporation shall conduct a program of safeguards development and training related to facilities it owns or operates.

NUCLEAR INDEMNIFICATION

Sec. 410. The Atomic Energy Act of 1954 as amended, is amended as follows:

(a) Subsection 11(s) is amended by substituting a comma for the period at the end thereof and adding the following: "including the Uranium Enrichment Corporation."

(b) The first sentence of subsection 170(d) is amended to read: "In addition to any other authority the Commission may have, the Commission is authorized until August 1, 1987, to enter into agreements of indemnification with is contractors and contractors of the Enrichment Services Corporation for the construction or operation of production or utilization facilities or other activities under contracts for the benefit of the United States involving activities under the risk of public liability for a substantial nuclear incident."

(c) The second sentence of subsection 170(d) is amended by substituting for the opening phrase: "In such agreements of indemnification, the Commission may require its contractor . . ." the following phrase: "In such agreements of indemnification the Commission may require the contractor . . ." at the commencement thereof.

SAFETY AND LICENSING

Sec. 411. (a) The Corporation shall receive existing Department of Energy authority in that its contractors are hereby exempted from the licensing requirements and prohibitions of sections 57, 62, 81, 101 or other provisions of the Atomic Energy Act of 1954 as amended to the same extent as the Department of Energy and its contractors are exempt in regard to the Department's own functions and activities.

(b) Subject to subsection (a) of this section, the Corporation shall not transfer or deliver any source, special nuclear or byproduct materials or production or utilization facilities to any person who is not properly qualified or licensed under the provisions of the Atomic Energy Act of 1954 as amended.

(c) The Corporation shall be subject to the Department of Transportation's regulation in transfer and deliver any source, special nuclear or by product materials to the same extent as the Department of Energy and its contractors.

Foreign Customers and International Relations

Sec. 412. (a) In its dealings with foreign customers, the Corporation shall, to the extent consistent with the Treaty on the Non-Proliferation of Nuclear Weapons, the Nuclear Non-Proliferation Act of 1978 and other federal law, apply a policy of furnishing goods and services with the maximum attainable reliability.

(b) The Corporation's facilities shall be subject to safeguards requirements of the Federal Governement. The Corporation shall be consulted fully and in advance whenever a proposed Agreement for the Corporation or subsequent arrangement might affect its operation. The Corporation shall cooperate fully with the IAEA and others in performing research, development and training on safeguards.

(c) In the event an International Nuclear Fuel Authority (INFA) is established pursuant to Section 104 of the Nuclear Non-Proliferation Act of 1978, the Corporation shall, as directed by the President and subject to any prior contractual obligations, cooperate fully in the operations of INFA.

Miscellaneous Provisions

Sec. 413. (a) The Corporation shall be deemed an instrumentality of the United States Government, except to the extent otherwise provided in the Act.

(b) The Comptroller General shall audit the Corporation's activities.

(c) The Corporation may self-insure or procure insurance to cover liability or property damage other than specified in Sec. 410.

(d) The Corporation shall carry out the classification and information control policy of the Government.

(e) The Corporation shall not be subject to the provisions of the Public Utility Holding Company Act of 1935, nor shall any company become subject to the provisions of that Act by virtue of ownership of stock of the Corporation.

(f) The Corporation shall be exempt from the antitrust laws. The Corporation's owners shall be exempt from the anti-trust laws to the extent necessary to fulfill the purposes of this Act.

(g) The Corporation and the Department of Energy shall share the costs of decontamination and/or decommissioning of the facilities and equipment based on the ratio of the separative work produced under the ownership of each party.

Transition to Private Ownership

Sec. 414. (a) When commercialization of any or all of the enrichment enterprises is deemed feasible by the Board of Directors, the Board shall submit to the President and the Congress a plan for the transfer of any or all of the functions of the Corporation to a commercial private non-government entity or entities.

(b) The transfer plan submitted pursuant to subsection (a) shall take effect by legislative approval.

(c) The Corporation established under Sec. 401 of this Act shall terminate upon the transfer of all the functions of the Corporation as provided in subsection (a).

SIDE-BY-SIDE COMPARISON OF MAJOR PROVISIONS OF FORD-JOHNSTON AND DOMENICI PROPOSALS FOR RESTRUCTURING THE U.S. URANIUM ENRICHMENT ENTERPRISE

FORD-JOHNSTON PROPOSAL (AMENDMENT NO. 176 TO S. 1084)	DOMENICI PROPOSAL (AMENDMENT NO. 177 TO S. 1100)
o Establishes the United States Enrichment Corporation (USEC) as a wholly-owned government corporation for purposes of taking over the uranium enrichment enterprise presently operated by the Department of Energy (DOE).	o Establishes the Enrichment Services Corporation (ESC) as a "Government and private ownership" corporation incorporated under the D.C. Business Corporation Act for purposes of operating, but not owning, the uranium enrichment enterprise of DOE as an agent of the U.S.
o Makes USEC generally subject to the Government Corporation Control Act. This Act: - requires inclusion of the USEC budget in the President's budget submission; - gives Congress the power to make authorized apropriations and require the repayment of capital and dividends; - but does not interfere with USEC's otherwise independent power to carry out its affairs (including capital repayment and payment of dividends) without fiscal year limitation.	o ESC not subject to the Government Corporation Control Act. ESC budget must be submitted to the President but is not included in the budget of the U.S. Government.
o Directs USEC to: (1) perform uranium enrichment and sell this service to the Department of Energy and qualified persons; (2) conduct research and development; and (3) operate as a continuing, commercial enterprise on a business-like, economic and efficient basis.	o Similar direction applies to ESC.

FORD-JOHNSTON PROPOSAL	DOMENICI PROPOSAL
o Gives direction of USEC to an Administrator appointed by the President with the advice and consent of the Senate. The Administrator has the general powers of a chief executive officer, but is subject to the supervision of the Secretary of Energy.	o Powers of ESC are vested in a five-person board of directors, three of which are appointed by the President with the advice and consent of the Senate. Two non-government directors are elected by the owners of at least $100 million in preferred stock of ESC. The board appoints chief executive officer, other officers, and establishes initial business plan.
o Creates a five-member Advisory Board appointed by the Secretary. The Board reviews and reports to the Secretary on the policies and performance of USEC.	o No similar provision applicable to ESC.
o Does not contain any provision for privatization.	o Requires ESC to: (1) utilize services of private industry to the maximum extent; (2) operate so as to foster and encourage privatization; and (3) when commercially feasible to submit a privatization plan to Congress. The plan takes effect upon legislative approval.
o Transfers to USEC all DOE property related to uranium enrichment including AVLIS and GCEP technologies.	o Gives ESC the right to operate the enrichment enterprise but does not transfer DOE property. May require ESC to operate both GCEP and AVLIS.

FORD-JOHNSTON PROPOSAL	DOMENICI PROPOSAL
o Transfers to USEC the unexpended balance of appropriations made to the enrichment program and all liabilities chargeable thereto.	o Transfers to ESC the unexpended balance of appropriations but does not seem to transfer liabilities.
o Transfers to USEC existing enrichment contracts.	o Same for ESC.
o Transfers TVA contracts with no change in obligations thereunder.	o Same for ESC.
o Sets the Equity of USEC equal to the net fair market value of assets transferred to the Corporation and requires payment into the Treasury of dividends on Equity when earned.	o Does not explicitly set the Equity of ESC, but provides for payment of dividends to holders of preferred stock.
o Sets the previously unrecovered costs of the enrichment program at $364 million and requires this amount to be recovered from enrichment customers with interest over 20 years.	o Sets previously unrecovered debt at $350 million and requires recovery from enrichment customers but without interest. $300 million is to be deposited in the Uranium Mill Tailings Fund created by the Domenici bill (S. 1100); $50 million goes to the Treasury.

FORD-JOHNSTON PROPOSAL	DOMENICI PROPOSAL
o Gives USEC the ability to borrow up to $1 billion from the Federal Financing Bank.	o Allows ESC to issue up to $3.5 billion in obligations, apparently including preferred stock. Maturities and rates of interest are set in cooperation with the Secretary of the Treasury. Seems to create a fallback mechanism whereby Treasury provides funds when private banks will not.
o Requires USEC to set prices for products, materials, and services that cover, over the long term, the costs of performing and maintaining corporate functions including: - research and development - depreciation of assets - repayment of initial $364 million debt and future borrowings - reasonable profit	o Sets similar pricing provision for ESC, but also requires payment to the U.S. of an "annual, reasonable payment" to be negotiated with the Secretary of Energy as compensation for the use of U.S. enrichment facilities and feedstocks by ESC.
o Removes various impediments to commercial operation such as requirements for divulgence of business information and use of unwieldy procurement practices.	o Does not contain similar provisions apparently because ESC is chartered under D.C. law and therefore is not subject to government practices.
o Exempts USEC and its subcontractors from Nuclear Regulatory Commission (NRC) licensing in the same way as DOE and its contractors are presently exempted and requires licensing for USEC within 5 years and requires implementation by USEC within 5 years thereafter.	o Contains permanent licensing exemption for ESC and its contractors in the same way as DOE and its contractors are exempted. ESC remains subject to Department of Transportation regulation.

FORD-JOHNSTON PROPOSAL	DOMENICI PROPOSAL
o Provides for sharing the costs of decontaminating and decomissioning uranium enrichment equipment between USEC and DOE on the basis of separative work that has been performed with the equipment under the ownership of each party.	o Similar provision applicable to ESC.
o Requires USEC to act in place of DOE for purposes of complying with any final judgment in the uranium miners' suit concerning enrichment of foreign source uranium.	o Resolves uranium miners' suit as part of S. 1100.
o Prevents USEC from being subject to any sequestration order under Gramm-Rudman.	o Similar provision applicable to ESC.
o Makes USEC tax-exampt except requires payment of real estate taxes.	o Similar provision applicable to ESC.
o Does not contain an antitrust exemption.	o Exempts ESC from the antitrust laws and exempts ESC stockholders to the extent necessary to fulfill purposes of the amendment.

COMPARISON OF LEGISLATION

S. 1100
Amdt. No. 0177

DOMENICI Enrichment Service Corp.

Licensing	Operate under existing DOE authority Subject to DOT regulation in transfer and deliver materials
Taxation	Exempt from all taxation except real property
Liability	Nuclear indemnification under 17 (d) of Atomic Energy Act Can be self-insured or procure insurance in liability other than nuclear
Decontamination/ Decommission	Cost sharing based on the ratio of SWU produced under each ownership
Transition to Private Ownership	Board of Directors decides when feasible by submitting plan to Congress Transfer plan takes effect only by legislative approval
Corporate Structure	-Government-Private Corp. -Board of Directors with five members -Chairman and two members to be appointed by the President with the consent of the Senate -Two non-government directors representing min of $100 m preferred stock each -Members may not have financial relationship with the Corp. -Except chairman, all members are on part-time term -Five year term -Board appoints Chief Executive officers and defines their duties -No political test

S. 1084
Amdt. No. 0176

FORD U.S. ENRICHMENT CORP.

Licensing	-Operate under DOE authority for 10 years -NRC-submit a licensing plan within 180 days and complete the regulations in 5 years -Operate under NRC regulation 5 years after the issuance of NRC regulation
Taxation	-Exempt from all taxation except real property
Liability	Nuclear indemnification under 170 (d) of Atomic Energy Act
Decontamination/ Decommission	-Cost sharing based on the of SWU produced under each organization
Transition to Private Ownership	-No provision
Corporate Structure	-Wholly owned government corporation -Administrator to be appointed by the president with the consent of the Senate -Reporting to secretary of DOE -Six year term reappointable -Five member Advisory Board appointed by the President -Report to the Secretary annually Five year term -Not more than three members from any one political party -Board to meet no less than quarterly

COMPARISON OF LEGISLATION

	S. 1100 Amdt. No. 0177		S. 1084 Amdt. No. 0176
Establishment	-Secretary incorporates the in 180 days and serves as -Chairman of the Board for 60 days	Establisment	-Thirty days after administrator takes office but no later than 80 days after date of enactment
Employees	-Not Federal employees -Board fixes compensation	Employees	-All Federal Employees -Compensation cap at Executive Level I for The Administrator. Level II for all other employees
Property	-The title and facilities remain in the Government -The corporation is authorized to provide enrichment service -Annual users' fee to DOE to be negoitiated with DOE	Property	-Transfer to the Corporate all rights, title, interests, real and personal properties -Production facilities R & D facilities Stocks of enriched uranium Stocks of feed material Unexpended appropriation
Finance	-Exempt from appropriation process nor fiscal limitation -The prior unrecovered government costs is $350 m before 1986 -Offer initial offering of preferred stock -Can invest in all lawful investment -Can issue bonds, securities, and any other indebtness The rate of interest to be determined by the corp with the approval of Treasury -The obligation authority is $3.5 billion -Corp can issue notes to Treasury at interest rates determined by Treasury	Finance	-Establish fair market value of assets "equity" within 2 years by Administrator & approved by Comptroller General -Corporation is subject to Budget and appropriations process -Initial Recoverable government investment is $364 million to be paid for with interest in 20 years -Pay dividends on equity to Treasury -Can issue and sell obligations to the Federal Finance Bank -The obligation authority is $1 billion

COMPARISON OF LEGISLATION

	S. 1100 Amdt. No. 0177		S. 1084 Amdt. No. 0176
Pricing	-Secure fuel supply to civilian power and maintain market share -Stimulate and assist the develpment of a private enterprise -Price for foreign customers can reflect an apporpriate surcharge or discount -Government customers pay comparable commercial rate	Pricing	Secure and maintain the financial and long term viability of the corp. -Cover, over the long term, operating and maintenance costs depreciation, interest payments and R & D -Government customers pay comparable commercial rate
Report	-Annual report to the President and Congress 90 days after each FY -Report includes corporation's projections and plans for next three years -Audit by comptroller general	Report	-Annual report to the President, Secretary and Congress 90 days each FY -Annual report and audit by accounting firm -GAO views annual audit

Senator **Ford**. We are very pleased to have Dr. A. David Rossin with us, the Assistant Secretary for Nuclear Energy to testify. He is accompanied by John R. Longenecker, Deputy Assistant Secretary for Uranium Enrichment.

Mr. Secretary, we are delighted to see you here today. You may proceed with your statement, and highlight it however you want to.

I have a good many questions I would like to ask you this afternoon.

STATEMENT OF DR. A. DAVID ROSSIN, ASSISTANT SECRETARY FOR NUCLEAR ENERGY, DEPARTMENT OF ENERGY, ACCOMPANIED BY JOHN R. LONGENECKER, DEPUTY ASSISTANT SECRETARY FOR URANIUM ENRICHMENT, DEPARTMENT OF ENERGY

Dr. **Rossin**. Thank you, Mr. Chairman.

At the previous hearing this committee examined in considerable detail the problems facing the U.S. uranium enrichment enterprise. At that time, the Chairman aptly pointed out, if we are unable to resolve the complex problems that we face this year, we run the real risk of losing the uranium enrichment enterprise.

Since that time the Department has completed its review of alternative courses of action to address the problems facing the enrichment enterprise.

On March 31, 1987, Secretary Herrington recommended to Congress that the enrichment enterprise be restructured as a Federally chartered corporation. The motivation for this proposal was clear.

By preserving the front end of the nuclear fuel cycle, nuclear power can compete on its technical merits as a safe, secure, domestic energy supply option for the United States.

Restructuring, first and foremost, is our top priority. This enterprise is too valuable and important to the nation to allow it to wither and be lost.

The business has to be made financially healthy and competitive, in the long term.

Aside from ownership considerations, we need to establish consensus on the mission, goals, and objectives of the enterprise.

We need to equip it with the flexibility it needs to compete effectively in the international market.

We need to establish stable policies, and predictable prices, that our customers can rely on.

If we do this, we can prevent the loss of a valuable national asset, assure the long term competitiveness of an important domestic part of our energy supply, and provide substantial benefits to utility customers and taxpayers alike.

The Administration is currently preparing and plans to submit legislation that would establish an independent uranium enrichment corporation.

The corporation would ultimately become a stockholder owned taxable business entity.

The specific steps that will enable the new organization to achieve these national goals include; first, to allow the new enterprise to make realistic business judgments and conduct its operations without the operational and budgetary limitations presently imposed; second, to allow the enterprise to have the flexibility to obtain capital by selling securities, including stocks and bonds, or by borrowing money, as with any private corporation; third, to establish industrial management with experienced and competent personnel at all levels, along with appropriate incentives for performance; fourth, to permit flexible competitive pricing and contract terms, as is done by all industrial concerns, including our foreign competitors, without the present restrictions that were established when the U.S. enjoyed a global monopoly; fifth, to allow the new enterprise to utilize internal cash flow or proceeds from financing to develop advanced technologies that are essential for competitiveness in the future; and sixth, to allow the new enterprise to enter into joint ventures, form subsidiaries, purchase patents and proprietary data, as well as buy or lease facilities generally on an international basis, as would be the case for any business enterprise.

I am going to ask John Longenecker to provide some specific points concerning restructuring. John?

STATEMENT OF JOHN R. LONGENECKER, DEPUTY ASSISTANT SECRETARY FOR URANIUM ENRICHMENT, DEPARTMENT OF ENERGY

Mr. LONGENECKER. Mr. Chairman, good afternoon.

In our previous testimony, we have told you about our three-part recovery strategy that we set for the business in January of 1984.

(Hearings: Ford, II)

Presentation to

Subcommittee on Energy Research & Development
Committee on Energy & Natural Resources
U.S. Senate

URANIUM ENRICHMENT PROGRAM BRIEFING

By

John R. Longenecker
Deputy Assistant Secretary for Uranium Enrichment
U.S. Department of Energy

May 4, 1987

DOE's Recovery Strategy Faces Final Hurdle

- DOE Customer Terminations Imminent
- DOE Inventories Being Liquidated to Pay TVA
- U.S. Technology Lead in Jeopardy
- Competition Increasing
  - Europeans Able to Expand
  - AVLIS Under Active Development
  - Threat of Soviet Penetration of U.S. Market

Restructuring Urgently Needed

We are dicussing today the institutional restructuring, which is the third part of that strategy. This, we say, is the last major hurdle that we face in the business.

We have told you that DOE customer terminations from utilities within the United States and abroad are imminent. They are concerned of course over our price today, the long term competitiveness of our prices, and the long term stability of the terms under which we provide enrichment services.

They are concerned about the definition of the unrecovered costs; whether and when we will deploy AVLIS, and resolution of the TVA demand charge impass.

Our business is so burdened today that the largest single financial liability, TVA, which requires over half a billion dollars a year in demand charges, is currently requiring us to liquidate our inventories of enriched uranium.

Further, our U.S. lead in AVLIS technology is currently being jeopardized. We have many other countries, including Japan, European nations, and the Soviet Union, who are developing advanced technologies to compete with us, knowing that there is some uncertainty as to whether we will develop and deploy AVLIS.

Furthermore, this is all in the context of competition throughout the world that is increasing. We have two European competitors operating four plants who are ready and able to expand, and who by the late 1990s could absorb all of our market.

We have one of those competitors, URENCO, who is investigating building a plant in the United States.

As I mentioned, AVLIS is under active development by other countries. If we do not act, our efforts being the first, they are able to proceed much more quickly, following our development path, and may in fact take the lead in AVLIS deployment.

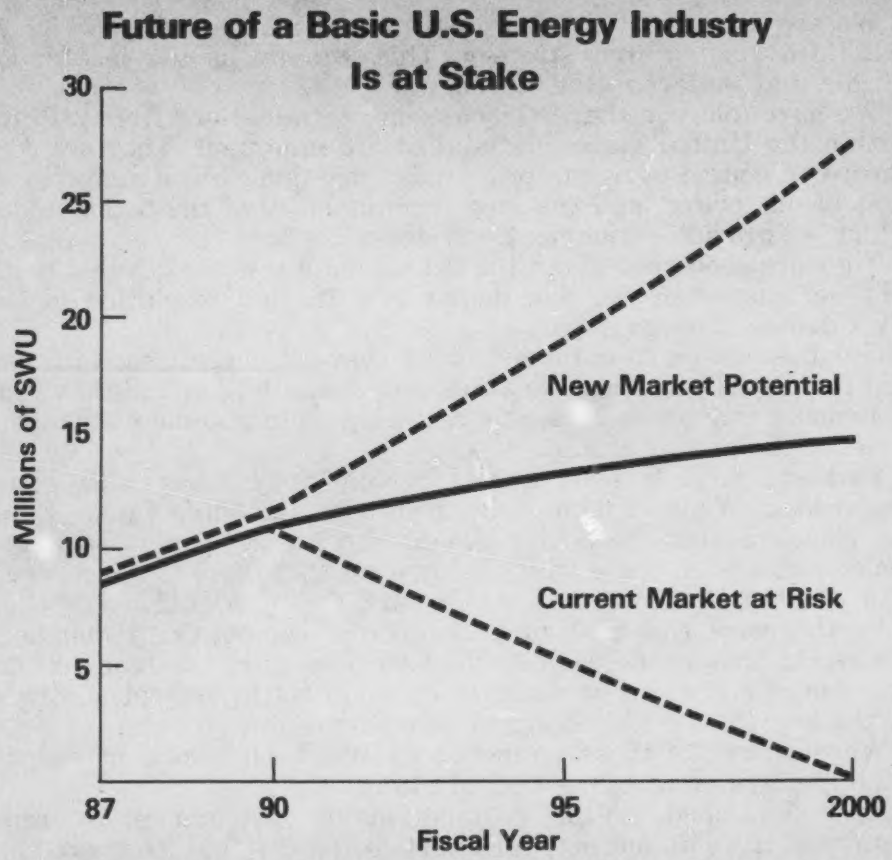
Finally, there is the threat of Soviet penetration of the U.S. market. The Soviets have available enrichment capacity. They too are working on advanced technologies. And, they have shown a willingness to sell at prices far below those associated with any of our competitors.

Thus, it would be ironic, we believe, to find that we would drive our U.S. utilities to rely on the Soviets as a source for nuclear fuel.

All of these, of course, lead us to conclude, and I believe you would agree based on your opening statement, that restructuring is urgently needed.

Shown here is what is at stake for the country.

It is essentially the future of this basic energy industry that is at stake.


Future of a Basic U.S. Energy Industry Is at Stake

We have described to you previously our sales projections, shown here as a solid line. If we retain our current customers, then our sales will increase gradually between now and the year 2000.

However, if strong action is not taken, under the termination provisions of our contracts, we could be making no commercial sales by the year 2,000, and essentially, be out of the business.

On the other hand, between now and the year 2000, there is an uncommitted sales potential throughout the world, primarily abroad, for over $5 billion in sales.

Senator Ford. Is that annually?

Mr. Longenecker. No, this is a total, sir, from 1987 through the year 2000.

But the total range of sales shown here is nearly $10 billion. In the year 2000 we can be either highly competitive, be the market leader, and capture some or all of this new market potential. Conversely, if we take no action today on restructuring, we believe we will probably be out of the commercial business.

What's at Risk?

- **Loss of $10 B in Potential Sales**
- **Further Deterioration of Balance-of-Trade — Up to $1/2 B/Yr**
- **Loss of a Multi-Billion Dollar National Asset**
- **Dependency on Foreign Sources of Supply for 15% of Our Electrical Energy**
- **6,000 Jobs in Enrichment Alone**

What is at risk then? There is more than just the $10 billion in potential sales. Many of these sales are made abroad. Last year we sold almost half a billion dollars in enrichment services to non-U.S. customers. This could increase substantially if we could capture some of those uncommitted sales because the strongest nuclear growth, and the largest uncommitted market share is in non-U.S. countries.

Alternatively we could lose this multibillion dollar national asset. It is owned by the taxpayers and provides very significant benefits. If we do not restructure the business, you may see it dwindle to nothing in little over a decade.

As I said earlier, nuclear power currently provides electricity for over 15 percent of our national needs. Fuel for these plants could be supplied in the future by foreign suppliers if the United States exits the business.

This would be synonymous to what we have done over the years with our oil supplies.

Finally, there are 6,000 jobs in the enrichment business throughout the United States.

Advantages of Restructuring

- **Establish Consensus for Enrichment Business Regarding Mission, Goals & Objectives**
- **Provide Stable Policies & Predictable Prices**
- **Assurance of Long-Term Supply of Enrichment Services**
- **Enhance Value of Enterprise**
  - **Prevent Loss of Valuable National Asset**
  - **Provide Benefits to Utilities, Taxpayers**
- **Improve U.S. Competitive Position**

So, the conclusion that we come to is that restructuring has very significant advantages. What we believe should be done first is to establish a consensus between the Administration and Congress on the mission goals and objectives for this enterprise.

Finally, we think that restructuring that would provide stable policies and predictable prices, which are crucial if we are going to keep the customers we have and compete for the uncommitted market. It would ensure a long term supply of enrichment services, which is crucial to utilities who are operating reactors over their 30 to 40 year life. And restructuring it would significantly enhance the value of the enterprise.

As I said earlier, by the year 2000 we could have a multibillion dollar enterprise that pays taxes and dividends to Treasury; creates jobs; provides important balance of trade benefits. Or, we could lose that asset and turn the liabilities we now face over to the taxpayers.

Restructuring will provide benefits in the future, to all constituencies including our customers, and the taxpayers who own it, and it will provide some stable assurances to the workers in the uranium enrichment business.

Finally, we believe that restructuring could improve the U.S. competitive position by allowing us to compete for uncommitted sales abroad.

We are very encouraged by the introduction of your legislation, and we look forward to working with you. We think that this is an historic opportunity for us to take an action which will preserve and strengthen a very important national asset.

Dr. Rossin. Mr. Chairman, I would like to complete our presentation. We are pleased that you introduced a bill last week that would restructure the uranium enrichment enterprise. What is proposed in that bill would significantly improve our ability to deal with the realities of the uranium enrichment market, and would enable the enterprise really to get back on its feet by providing the flexibility to compete in a changing world market.

Although the government corporation approach proposed in this bill differs institutionally from the ultimate formation of a private corporation as favored by the Administration, this philosophical difference should not prevent us from working cooperatively on what is clearly a common goal, that of ensuring the existence of a valuable, effective, competitive enrichment capability in the U.S. for the long term.

The first priority, we believe, should be to establish a healthy business. The ultimate ownership can be determined later.

We are also pleased that Senator Domenici and others have introduced S. 1100, which you referred to as amendment 177?

Senator **FORD**. That is correct.

Dr. **ROSSIN**. It is familiar to us, and it includes some very important features. We are studying these two bills in the hope that we can find common ground. We are eager to work with the Congress to achieve timely enactment of legislation that will meet our mutual objectives.

Mr. Chairman, this completes my oral remarks. Mr. Longenecker and I would be happy to answer your questions at this time.

[The prepared statement of Dr. Rossin follows:]

STATEMENT OF
DR. A. DAVID ROSSIN
ASSISTANT SECRETARY FOR NUCLEAR ENERGY
U.S. DEPARTMENT OF ENERGY
BEFORE THE
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT
COMMITTEE ON ENERGY AND NATURAL RESOURCES
U.S. SENATE

MAY 4, 1987

Mr. Chairman, it is a pleasure to be here today to discuss the U.S. uranium enrichment enterprise.

Since 1984, the Department of Energy (DOE) has been implementing a "recovery strategy" to strengthen the competitive posture of the U.S. uranium enrichment business by offering more competitive prices and flexible contract terms, while adopting a more business-like approach to research and development and retaining market share. This effort is based on the premise that the objective of the enterprise is to retain a financially strong enrichment capability in the U.S. to help meet important national security and energy security objectives.

Despite our success in improving our competitive position since 1984, it has become increasingly difficult for DOE to manage the enterprise efficiently. Conflicting objectives, varied interpretations of the Atomic Energy Act, and the interplay of competing special interests have each contributed to the present environment within which basic business issues such as pricing, reinvestment, and reliability of service have become unpredictable. In foreign markets, a major factor that has enabled the enterprise to continue to compete is the current relative weakness of the dollar, a trend that could be reversed at any time.

Over the last year, the Department has evaluated a number of options for restructuring the uranium enrichment enterprise to resolve current problems and to put the business on a sound footing for the future. In February, the Secretary forwarded a report to the Congress that described the need to obtain Congressional consensus regarding the structure, mission, goals, and objectives of the enterprise. Our primary motivation is to create an efficient, dynamic and competitive enrichment enterprise and thereby seek to preserve one of the basic industries in the United States where we still have a clear technological advantage.

ESTABLISHMENT OF A FEDERALLY-CHARTERED CORPORATION

On March 31, 1987, Secretary Herrington recommended that Congress establish a Federally-chartered corporation to manage and operate the U.S. uranium enrichment enterprise, with eventual sale of the corporation's stock to the public. "Maintaining a strong and economical domestic commercial uranium enrichment enterprise," he said, "is vital to our energy security." He added, "Restructuring the enterprise into a corporation can enhance its efficiency and competitiveness and ensure its long-term ability to meet its obligation to the nation."

Restructuring the U.S. uranium enrichment enterprise to enhance its competitiveness is needed now. Restructuring DOE's commercial enrichment enterprise will establish an improved system for providing competitive uranium enrichment services within the United States to meet the needs and service requirements of domestic and foreign commercial customers. Restructuring will enable the business to capitalize on the low cost production base and the research and development lead that it now enjoys.

By restructuring, the Administration hopes to achieve the following important national goals:

- To preserve the existing enterprise (which is unlikely to be duplicated in the near-term by industry) and the capability for long-term continued worldwide competitiveness by the United States;
- To provide for the orderly transfer of uranium enrichment activities to the private sector with a high degree of certainty;
- To recover funds for the Federal Government at an early date; and,
- To enhance the climate for further private domestic competition in the United States.

The specific steps that will enable the new organization to achieve these national goals include:

- To allow the new enterprise to make realistic business judgements and conduct its operations without the operational and budgetary limitations presently imposed.
- To allow the enterprise to have the flexibility to obtain capital by selling securities including stocks and bonds, or by borrowing money, etc., as would any private corporation.
- To establish industrial management with experienced and competent personnel at all levels--along with appropriate incentives for performance.

- To permit flexible, competitive pricing and contract terms (as is done by all industrial concerns including our foreign competitors) without the present restrictions that were established when the U.S. enjoyed a global monopoly.
- To allow the new enterprise to utilize internal cash flow or proceeds from financing to develop advanced technologies that are essential for competitiveness in the future.
- To allow the new enterprise to enter into joint ventures, form subsidiaries, purchase patents and proprietary data, as well as buy or lease facilities, etc., generally on an international basis, as would be the case for any business enterprise.

If these objectives are met, they would lead to a more efficient enrichment enterprise that would be able to respond to an increasingly competitive world market for enrichment services. Such a restructured enrichment enterprise would be able to meet the growing competition from two major European consortia that operate internationally as private firms with strong government backing. Such a restructured enterprise would be a profitable business venture, make appropriate returns to the U.S. taxpayers (by direct Treasury payments as well as future tax revenue) and would contribute to improvements in the Nation's balance of trade, the enhancement of national security and energy supply diversification and the continuation of substantive U.S. participation in worldwide nuclear fuel cycle affairs, which is important in dealing with proliferation and other nuclear issues.

A further goal would be to establish a "climate" that allows other private uranium enrichment ventures to be formed in the United States and to compete freely. Such ventures might construct new facilities or purchase facilities not needed by the restructured DOE uranium enrichment enterprise.

PROPOSED ORGANIZATIONAL CONCEPT

The corporation would be organized under enabling legislation by the Congress as a stock-owned taxable business corporation.

The corporation would operate precisely like a private business except that, initially, the stock would be Government-owned. This would probably involve a high degree of Government direction and oversight during an initial period. However, it would be desirable to have some private participation and direction from the outset.

The new corporation would not be an "instrumentality of the U.S. Government." It would function entirely as a private corporation, despite the Government's equity ownership. Accordingly, it would be unnecessary to change management and operating practices when ownership passed wholly or partially to the private sector.

The corporation would be liable for Federal and state income taxes, ad valorem taxes, etc., just as any state chartered corporation. It is possible that some special income tax provisions might be made for the period during which the majority of the stock (or voting stock) is held by the Government.

DOE would transfer all of the relevant assets of the DOE uranium enrichment enterprise to the corporation. This would include the Portsmouth and Paducah gaseous diffusion plants and ancillary facilities as well as the power supply contracts, the inventories of uranium feed (with a specified amount, about half of the present natural uranium stockpile, retained by DOE to meet U.S. defense needs), the stockpile of preproduced enriched product, as well as patents, know-how, licenses, and contracts. The transferred facilities would not include the high enrichment cascade at Portsmouth (that would continue to be owned and operated by DOE, which would purchase low enrichment feed from the corporation), or the Oak Ridge Gaseous Diffusion Plant that is maintained in standby condition by the DOE Office of Defense Programs. The Gas Centrifuge Enrichment Plant (GCEP) facilities at Portsmouth could be transferred as well or kept (and disposed of separately, if feasible) by DOE.

DEVELOPMENT OF ENABLING LEGISLATION

Changes of the type being proposed by the Department will require the passage of enabling legislation. The Administration plans to submit proposed legislation to Congress in the near future. Legislation may also be required to address a number of important issues related to implementation. These include:

o The possibility that the corporation will be unable to assume responsibility for the full TVA power contract in its present form and expect to be economically viable;

- The feasibility of transferring the present customer service contracts to the corporation;
- The continued development of the Atomic Vapor Laser Isotope Separation (AVLIS) technology until the need for further development can be evaluated by the corporation;
- The value of the enterprise to be recovered by the Government;
- The need and feasibility of Nuclear Regulatory Commission (NRC) licensing and regulation of existing as well as new enrichment facilities; and,
- The apportionment of eventual decontamination and decommissioning costs between the Government and the enrichment corporation.

We are confident that these issues can be successfully addressed in a manner that will provide the enhanced stability and flexibility needed by the enterprise. The increased reliability and credibility of the new corporation would better enable a strong domestic uranium enrichment enterprise to support domestic civilian nuclear power, contribute to a favorable balance of trade, and retain a crucial technological edge over other competitors.

We are eager to work with the Congress to achieve timely enactment of legislation.

Senator FORD. Thank you very much, Mr. Secretary.

Senator Domenici, do you have an opening statement you would like to make?

STATEMENT OF HON. PETE V. DOMENICI, A U.S. SENATOR FROM THE STATE OF NEW MEXICO

Senator DOMENICI. Thank you very much, Mr. Chairman.

I would just ask that even though it is not very long, you would make it a part of the record.

Senator FORD. Without objection.

Senator DOMENICI. I would just say two things. First, Mr. Chairman, while your bill and ours may be different in some respects, I want to congratulate you for taking the lead in this area.

It ought to be obvious to anyone that is familiar with the United States enrichment program that we are in desperate need of some changes if we are going to keep a viable enrichment business in the United States, and that one of the aspects that must be changed is, obviously, to make this entity an institution which can respond to the marketplace, and which is subject to the minimum extent possible to the vagaries of annual Congressional processes once you get it established.

I am convinced that within your bill and my bill are some areas where we can compromise. I hope before you complete the hearings you would ask the private sector and those who do promote new corporations whether or not we have a viable basic starting point.

Senator FORD. I believe we will have those on Friday.

Senator DOMENICI. On Friday?

Senator FORD. Yes.

Senator DOMENICI. Because I firmly believe that, if not at the outset, we have to be at least moving in the direction of this institution, this corporation, becoming autonomous, acting and conducting its business like a business, and without that, obviously, we are going to be subject to some very difficult Congressional restraints.

And I do not mean health and safety related changes. I mean changes with reference to our processes. There are some real needs to take four or five of those major issues that we are all familiar with and resolve them.

They have to do, obviously, with TVA demand charges. They have to do with the continued insistence, by some parts of the administration, that huge numbers of billions of dollars are still owed.

I mean we have to resolve that issue. I do not think we owe very much to this industry, but if that hangs around as it is, we cannot get anywhere.

Senator FORD. You and I are only $14 million apart, so we are doing pretty well.

Senator DOMENICI. We are doing very well.

Senator FORD. $350 to $364 million.

Senator DOMENICI. We will settle.

Senator FORD. We will settle somewhere in between, will we not?

Senator DOMENICI. And that will work.

Senator FORD. Either figure we will settle for.

Senator DOMENICI. Either figure will work.

I think, however, that the most important thing is that you consider this serious enough, Mr. Chairman, and I have heard our full committee chairman say it is important enough, to try to do something to save this major American industry this year.

And I hope we can.

Thank you very much.

[The prepared statement of Senator Domenici follows:]

OPENING STATEMENT - SENATOR PETE DOMENICI

MAY 4, 1987 HEARING ON RESTRUCTURING OF THE URANIUM ENRICHMENT ENTERPRISE

GOOD AFTERNOON. I AM PLEASED THAT SENATOR FORD HAS SCHEDULED THE TWO HEARINGS THIS WEEK TO CONSIDER THE OPTIONS FOR A RESTRUCTURING OF THE DEPARTMENT OF ENERGY'S URANIUM ENRICHMENT ENTERPRISE -- A SUBJECT THAT I HAVE BEEN ACTIVELY INVOLVED IN SINCE 1981, AND A SUBJECT THAT ALL OF US SHOULD BE CONCERNED WITH IF WE CARE ABOUT THE LONG-TERM VIABILITY OF THIS ENTERPRISE.

I DON'T THINK THAT ANYONE WHO HAS FOLLOWED THIS SUBJECT FOR VERY LONG CAN DISAGREE WITH THE BASIC PREMISE THAT OUR PRESENT URANIUM ENRICHMENT ENTERPRISE IS SEVERELY CONSTRAINED IN ITS ABILITY TO RESPOND TO TODAY'S MARKET CHALLENGES. IT IS STRANGLED BY THE CONGRESSIONAL BUDGETARY PROCESS, AND FACES NUMEROUS OTHER OBSTACLES TO ITS ABILITY TO OPERATE IN A PROGRESSIVE, BUSINESSLIKE FASHION. THIS SITUATION EXISTS BECAUSE OF THE FACT THAT THE ENRICHMENT ENTERPRISE NOW FINDS ITSELF AS A CREATURE OF THE FEDERAL BUREAUCRACY IN A TIME WHEN THE MARKET FORCES DEMAND A MORE RESPONSIVE STRUCTURE.

IT IS TIME THAT CONGRESS COMES TO GRIPS WITH THE UNTENABLE POSITION THAT THE ENRICHMENT ENTERPRISE NOW FINDS ITSELF IN. WE MUST PROVIDE ENABLING LEGISLATION THAT WILL ALLOW THE ENTERPRISE TO BETTER SERVE THE NEEDS OF ITS CUSTOMERS, DEVELOP AND IMPLEMENT LONG-RANGE BUSINESS AND MARKETING STRATEGIES, CONDUCT RESEARCH AND DEPLOY ADVANCED ENRICHMENT TECHNOLOGIES, BE ABLE TO ACCESS THE FINANCIAL MARKET FOR INVESTMENT CAPITAL, AND BE ABLE TO EFFECTIVELY COMPETE IN THE WORLD MARKETPLACE.

We have before this Committee two pieces of legislation that seek to achieve many if not all of the goals I just mentioned.

My own bill is a product of considerable deliberation, aimed at addressing the concerns outlined by the Tri-Committee Advisory Board in 1984, aimed at meeting the objectives recommended by the Administration, and intended to get this business back on its feet and eventually into the hands of private enterprise, should conditions make that a viable option. And I have no doubt that, with resolution of even just a few of the major show-stoppers -- unrecovered costs and TVA demand charges, for instance -- this business CAN be made competitive and therefore attractive to private interests.

I am anxious to get feedback from today's witnesses, as well as the witnesses we'll hear from on Friday, as to precisely how effective each bill will be in realizing a successful transformation of our precious but precarious enrichment enterprise.

I look forward to working with Senator Ford to blend our two proposals together.

Senator **Ford**. Senator Hecht, did you have a statement you would like to make?

STATEMENT OF HON. CHIC HECHT, A U.S. SENATOR FROM THE STATE OF NEVADA

Senator **Hecht**. Thank you, Mr. Chairman.

I would just say that I too applaud the fact that you are having these hearings, and the fact that our distinguished Chairman, Senator Johnston, took many Senators over to Sweden and France just a couple of weeks ago to look at their whole program.

And I think it is time that we in America address this situation with respect to our overall energy program, and I think we have to rethink our nuclear program.

And this is just part of that whole complex issue.

Thank you, Mr. Chairman.

Senator **Ford**. I ask unanimous consent that a statement by our Chairman, Senator Johnston be included in the record at this point.

[The prepared statement of Senator Johnston follows:]

STATEMENT OF SENATOR J. BENNETT JOHNSTON

Chairman, Committee on Energy and Natural Resources

Hearing on Redirection of the Uranium Enrichment Program

May 4, 1987

I congratulate Senator Ford for holding these hearings on the redirection of the uranium enrichment program. We have two excellent proposals before us that would greatly improve the operation of that program. Indeed, unless something very like these proposals is enacted, the program is almost sure to collapse within a very short time.

Senator Ford and I have a proposal to establish a wholly-owned government corporation to own and operate the present Department of Energy uranium enrichment enterprise. Senator Domenici, Simpson, Bingaman and Wallop have a proposal to establish a Government and private-ownership corporation to operate the DOE enterprise as an agent of the United States.

There are differences between these two proposals, but we should be emphasizing the common interests reflected in our goals, not the differences in these legislative proposals.

I believe we all have the same goals:

Number one, we want to preserve this domestic enterprise so that American ratepayers will not have to be dependent on foreign sources of enriched uranium.

Number two, we want the United States to retain and eventually to expand its share of the $2.5 billion annual world market for enrichment services.

Number three, we want the United States to continue to be the leader in enrichment technology that it is today.

Whatever will best achieve those goals is what we all want. I agree with the Subcommittee Chairman that we are here to talk about solutions. We have had the hearings on the problems. Now is the time to begin solving those problems.

Senator **Ford**. I have several questions. And it seems to me that they are all the same question, just kind of nibbles around the edges, and I want to get to one basic question that to me is extremely important.

Mr. Secretary, in your opening statement you indicated a need to reach a consensus—I think you used that statement—on the mission, objectives and goals of the uranium enrichment enterprise.

What would you like that consensus position to be?

Dr. **Rossin**. In our view, it is essential that the uranium enrichment enterprise be viable, be financially sound and competitive for the long term; I think the key to this is a consensus that we should have in this country, a domestic uranium enrichment capability that provides an assurance of fuel supply for the one-sixth or more of our electrical energy that comes from nuclear power.

Senator **Ford**. What should—when you talk about the long term provisions, long term ability. Can we establish a set of priorities you think that policymakers would approve, i.e. Congress, so that the long term provision of service by the enterprise will be preserved?

Dr. **Rossin**. Yes, indeed.

Senator **Ford**. Just elaborate on it. What would they be.

Dr. **Rossin**. Let me start, and I will ask John to continue.

In my view, in the view of the Department, the top priority is right now to put this into a structure that will work.

When I say long term, I mean something that the people who buy uranium enrichment service will have confidence in, that they know there will be a technology and facilities there that can deliver the services they need at a competitive price.

And when I say long term, I recognize as you well know that the contracts that we write with these utilities are for the lives of their plants, which can be 30 years or 40 years from now.

And to me it is absolutely crucial that the nation recognize that it has an obligation to make it possible to assure the fuel supply for these nuclear power plants.

John, do you want to expand?

Mr. **Longenecker**. Mr. Chairman, I would be more specific by saying that first we would want to see a competitive objective established for the business with respect to both pricing and terms. It is crucial of course to give the business self financing authority. It is also crucial that the business be allowed to make businesslike decisions for the enterprise, including operation of current plants, and conduct of R&D. Of course, that requires that we establish the unrecovered government cost and that we fairly value the assets and liabilities of the total enterprise.

Given an overall competitive objective, and as Dr. Rossin said, the goal of staying in business for the long term to meet the energy and national security interests of the nation would comprise a sound, valid set of objectives for this enterprise in the future.

Senator **Ford**. You indicated in your earlier testimony that on the order of $10 billion of sales are at risk if nothing is done to help the enrichment program, and that is the chart you have on the board now.

Also, at our last hearing, an executive from Duke Power testified, and by the way, I was impressed by him, that his and other utilities would have no choice—and I underscore no choice—but to cancel their contracts with DOE if prompt corrective action is not taken.

Let me ask you this question then. Does the restructuring in our amendments provide the enterprise with sufficient authority and flexbility to retain this important market?

Mr. **Longenecker**. I believe that it does.

Senator **Ford**. What specific provisions do you see as essential for giving the enterprise—I am talking about in pecking order, I guess—to be sure that it continues to have throughout the long term the flexibility and authority that it needs.

Mr. **Longenecker**. Those elements are included in the list that I mentioned before.

They are establishing the unrecovered government costs; providing a long term competitive objective so that people could be assured a supply at a competitive price; providing the business with some self-financing authority; and giving it the ability to make decisions such as on the development and deployment of AVLIS, in a business-like fashion.

That set of objectives I think, would go a very long way to ward convincing our utility customers that the United States will be in the business and will be competitive so that they can continue to rely on us.

Senator **Ford**. Do you think the changes that we are proposing here would enable Duke Power and others like them to avoid cancelling their contracts?

Mr. **Longenecker**. Yes, I certainly do.

Senator **Ford**. One of the issues is bothering us some, I think, and you brought it up, since our last hearing I understand that TVA has presented a proposal regarding the demand charge issue.

Has any progress been made as it relates to your negotiations?

Dr. **Rossin**. We have been engaged in intense negotiations with TVA at the staff level ever since that time. And we think we have made some progress. TVA has responded to us with a proposal of their own. We have analyzed that proposal and feel that it is a positive step but does not go far enough to really accomplish what we feel has to be accomplished, and that is to get the demand charges that we face in the future, down to a level which we believe represents the appropriate level of demand charges.

The TVA proposal did have some positive elements. It indicated that they were willing to talk about a firm value, which they had not done before, and they were willing to talk about rescheduling of payments, which they had not done before.

But we are still far apart on the total sum of money involved. We intend to move further in our negotiations with TVA on this, and we are still talking.

Senator **Ford**. If they have some confidence we are moving in the right direction, they may—I think they are just renewing their contracts a year at a time are they not, just to see what we are going to do?

Dr. **Rossin**. I would say, rather than renewing them, our customers are not acting to terminate them a year at a time.

Senator **Ford**. And they can give a year's notice, what is it?

Mr. Longenecker. Yes, sir, each April they have the ability to renew the contract 10 years hence.

Senator Ford. For 10 years hence?

Mr. Longenecker. Each year they have the requirement to indicate the amount of product that they plan to take from us ten years' hence. There are termination provisions, so that with 10 years notice, termination is free, with 9 years' notice, the penalty is 10 percent; with 5 years notice, the penalty is 50 percent. The termination penalty for 1987 deliveries is 100 percent.

As we have discussed previously, because of the uncertainty in our program, including the unrecovered government cost and the miners' lawsuit, we have relieved customers for the last two years of their requirement to give us their take percentages for 1996 and 1997.

So currently the customers are tied to us through 1995.

Senator Ford. Let me talk about one final problem.

Our proposal calls for the transfer to the corporation of all facilities and equipment and knowledge relating to the enrichment of uranium, including that used to make a high assay uranium used by the military.

Do you believe that national security concerns and interests can be properly preserved and protected if responsibility for operation of the so-called TOP at Portsmouth is transferred to this corporation?

Mr. Longenecker. I believe it can.

Dr. Rossin. I would add, I think it can. But I think there are other alternatives as well. It could be held as a separate part. It could be done either way.

Senator Ford. How can you assure the supply of lower assay uranium to feed the TOP for the military needs if the responsibility for producing the lower assay uranium is transferred from DOE to a private corporation?

Mr. Longenecker. Well, primarily, the government I assume, would want to have first right of refusal to buy the low assay portion back if the private venture were to fail.

That is, of course, one of the uncertainties in privatization that we think can be covered with some time and with some adequate thought.

As you point out, though, our philosophy of getting there is not substantially different from yours. In our March 31, 1987 letter, we indicated that some transition organization would likely be required to assure you, the Administration, and our customers, that the business was profitable, that it was stable, and that it could be well operated.

So I guess the fix-it-and-then-sell-it philosophy, or a gradual transition gives us the ability, to make some of those decisions like who operates the TOP and what kind of fallback provisions we need, and then see what works.

Senator Ford. Without objection, I want to insert into the record DOE's March 31, letter to Senator Johnston and put it in the record.

[The letter referred to follows:]

Department of Energy
Washington, DC 20585

March 31, 1987

Honorable J. Bennett Johnston
Chairman, Committee on Energy
  and Natural Resources
United States Senate
Washington, D. C. 20510

Dear Mr. Chairman:

The Conference Report to the 1987 Continuing Appropriations Bill (Conference Report 99-1005: House Joint Resolution 738) requested the Department of Energy to respond to specific issues related to our uranium enrichment enterprise.

The Department's February 17, 1987, letter to the cognizant appropriations subcommittees forwarded a report of our reviews of the uranium enrichment enterprise and further promised a specific recommendation on restructuring of the enterprise by the end of March.

The Department appreciates your continuing interest in our enrichment enterprise and is pleased to provide you the enclosed copy of the Secretary's recommendation.

Sincerely,

ADavid Ross

A. David Rossin
Assistant Secretary
  for Nuclear Energy

Enclosure

cc: Honorable James A. McClure
    Ranking Minority Member

THE SECRETARY OF ENERGY
WASHINGTON, D.C.

March 31, 1987

Honorable J. Bennett Johnston
Chairman, Subcommittee on Energy
and Water Development
Committee on Appropriations
United States Senate
Washington, D.C. 20510

Dear Mr. Chairman:

The Department's letter to the Committee of February 17, 1987, forwarded a report on our reviews of the uranium enrichment enterprise and further promised a specific recommendation on restructuring of the enterprise by the end of March.

We have concluded that the enrichment enterprise can best meet its commercial obligations and challenges if it is restructured as a federally chartered corporation which can be sold to the public through a stock offering at an appropriate time. Its high enriched uranium production capabilities would remain under Federal Government ownership.

At the core of this recommendation is the belief that maintaining a strong and economical domestic commercial uranium enrichment enterprise is vital to our energy security. Restructuring the enterprise into a corporation can enhance its efficiency and competitiveness and ensure its long-term ability to meet its obligation to the Nation.

We consider that, at a minimum, a corporation, chartered by Congress to assume the responsibilities for uranium enrichment, would be empowered to: enrich uranium; engage in related business and relevant aspects of the nuclear fuel cycle; contract with customers and suppliers; conduct research and development as necessary; raise funds through access to capital markets; retain and reinvest revenues; protect commercially sensitive information; grant access to patents and other proprietary data; operate under generally accepted private sector accounting, organizational, employment and operational principles and practices; and work out the institutional hurdles involved with privatization of uranium enrichment, including Nuclear Regulatory Commission (NRC) licensing.

The successful formation of a corporation, of course, requires resolution of the major issues facing the enterprise, including the Tennessee Valley Authority multi-billion dollar demand charges, the ability to continue the development of advanced enrichment technology, the transferability of the contracts with utilities for enrichment services, the value of the enterprise to be recovered by the Government, future NRC licensing and regulation of the enrichment facilities, Price-Anderson coverage, and apportioning of eventual decontamination and decommissioning costs between the Government and the enrichment corporation.

We are confident that these formidable challenges can be met. We are eager to discuss this proposal further with you and to work with the 100th Congress to structure enabling legislation that can be enacted in 1987 to implement this recommendation.

Yours truly,

John S. Herrington

John S. Herrington

Enclosure

cc: Honorable Mark O. Hatfield
Ranking Minority Member

PROPOSED RESTRUCTURING OF THE DEPARTMENT OF ENERGY'S URANIUM ENRICHMENT ENTERPRISE

A range of options have been considered which can be categorized in the following broad terms:

- Sale or lease of all or part of the Government's enrichment assets.
- Maintain the status quo.
- Restructure the enterprise.

While sale or lease of all or part of the Government's enrichment assets could be beneficial, the Department's request for expressions of interest in the enrichment enterprise last year did not result in any entities interested in owning the entire enterprise in the near term. (There was interest in owning some of the assets.) We see no changes in the market since then. The option of maintaining the status quo was rejected since this will likely lead to further deterioration of the enterprise, thus jeopardizing the domestic supply of enrichment services, and the reliability of the U.S. in the eyes of foreign customers.

To achieve the objective of maintaining a competitive uranium enrichment enterprise in the United States, the Department has concluded that the enterprise should be restructured. An independent organization should take over the relevant assets of the Department of Energy uranium enrichment enterprise and carry out in a businesslike, competitive, and profitable manner the commercial uranium enrichment activities now conducted by the Department.

This independent organization would be a federally chartered enrichment corporation empowered to do all the things a private business corporation is normally empowered to do, namely, conduct the business; enter into contracts; buy, sell, assign, pledge, lease, or otherwise acquire and dispose of facilities, inventories, receivables, real estate, contracts, and other assets; borrow money; sell stock and other securities; conduct research and development; acquire patents and license their use. The corporation should be empowered to engage in any and all related businesses such as the manufacture and supply of enrichment equipment and related supplies and relevant aspects of the nuclear fuel cycle.

The new enrichment corporation would acquire all assets of DOE's uranium enrichment business, including plant and equipment, non-defense inventories, licenses, patents, and know-how, including AVLIS. The portion of the Portsmouth facility utilized for production of highly enriched uranium would remain under Federal Government ownership. The corporation would not acquire GCEP. At this time, it is unclear whether the corporation can assume the responsibility for the TVA power contracts, in their present form, and expect to be economically viable.

The ownership of the enrichment corporation should transfer from the Government to the public as soon as possible. While an immediate transfer in ownership might be preferable, the transfer may have to await the resolution of certain issues, such as Nuclear Regulatory Commission (NRC) licensing and regulations and demonstrated financial health. In the interim period, the corporation might be a Government-owned corporation. If a Government-owned corporation is required, then the plan and timetable for becoming publicly owned should be part of its enabling legislation and charter.

The Government would receive convertible preferred stock representing the value of plant and equipment and other assets transferred to the corporation. This preferred convertible stock could pay a fixed dividend and could be sold by the Government to the public who would have the option of converting it to common stock. Thus, the ultimate value of the uranium enrichment facilities would be determined by the actual sale price of the stock when sold by the Government.

As a private corporation, the enrichment corporation would be subject to Federal, state, and local taxes. It would also be subject to regulation by NRC and would require Price-Anderson insurance coverage. The corporation would be subject to materials safeguards and accountability, would be required to protect classified information and technology, and be subject to trade laws and the Nuclear Nonproliferation Act restrictions.

The establishment of this enrichment corporation would resolve many of the problems currently faced by the DOE enrichment enterprise which prevent it from operating efficiently and competitively in the present market and which, if not resolved, could lead to a further deterioration of the enterprise. In particular, this proposal would have the following benefits:

- Allow the uranium enrichment enterprise to operate in a businesslike, competitive, and profitable manner with a clear, well-understood objective.
- Free the enterprise from governmental, budgetary, administrative, personnel and procurement limitations which prevent realistic business planning and operations.
- Permit flexible pricing and contracts, as is done by the competitors, without present restrictions.
- Establish industrial-style management.
- Allow development of advanced technologies based on their importance to future competitiveness.
- Recover as much of the Government's investment in the enterprise as is practicable as determined by the market.
- Provide a climate for the development of competition.

This proposal will also support a number of national objectives which are currently in jeopardy because the current structure and flexibilities of the enrichment enterprise are inadequate in today's marketplace. A strong domestic uranium enrichment enterprise is key to achieving national objectives of supporting domestic civilian nuclear power, contributing to a favorable balance of trade, and retaining a technological edge over our rivals.

Failure to adjust to meet the challenge of fierce international competition could result in the U.S. soon becoming the free world's supplier of last resort. As such, the U.S. enrichment facilities would have to remain in operation, serving only a limited market, while continuing to carry its heavy overhead costs. This would further jeopardize the domestic supply of enrichment services, the recovery of investments in the enterprise, the Nation's balance of trade, employment, and reduction of the Federal deficit.

Senator **Ford**. Gentlemen, do you have any further questions?

Senator **Domenici**. No further questions.

The **Chairman**. No.

Senator **Ford**. We will be working closely together. I hope you would look at what Senator Domenici said a few moments ago about phase in, because I think you are beginning to look at it both ways here just a little bit.

And it may be that with the—how fragile it is right now. And another thing I want you to look at, when you put it out there on the market, who is going to buy it?

I want you to be very careful, because when we saw it before, and those who have signed protocols with other countries that are here, that have had interest in it, they are now downtown in the law office, and they are beginning to buy a lot and represent a lot of people and a lot of countries.

And where you find corporations that are wholly owned and some other things, I want you to look very careful at that and be sure that we have language structured in here so we do not allow some other country to come in the back door and buy our private enterprise.

Mr. **Longenecker**. Mr. Chairman, we will. The transition that you mentioned, I would underscore, is something that we fully endorse.

I think that on the principles of how to run the enterprise to make it profitable, we are very close. The parts where we probably require some further discussion are the pace at which we make the transition, and the ultimate goal.

However, after three years of telling you about our recovery strategy and the improvement in our competitive position, today we are talking about the most crucial next step for the enterprise. This legislation will determine the future of the business for the decades ahead. How we take that step, and the timeframe in which we take it is very, very important.

And I hope that it occurs this year.

Senator **Ford**. I am looking forward to it. But it will be interesting if we can make a timetable.

Thank you gentlemen, very, very much.

Let me see if can get all these right now. We have Mitchell Diamond, Vice President; and Anjan Chatterjee; and Robert Tyre; representing Booz, Allen & Hamilton, Inc., of New York.

Gentlemen, are we just going to have one make the statement?

Mr. **Diamond**. Mr. Chairman, I am going to make a few remarks, and then I will turn to Mr. Tyre.

Senator **Ford**. That is fine.

STATEMENT OF MITCHELL S. DIAMOND, VICE PRESIDENT, BOOZ, ALLEN & HAMILTON, INC., ACCOMPANIED BY ROBERT A. TYRE, VICE PRESIDENT; AND ANJAN CHATTERJEE, PRINCIPAL

Mr. **Diamond**. Good afternoon, Mr. Chairman. Thank you for inviting us here.

I am Mitchell Diamond. My colleagues to my right are Mr. Robert Tyre and to his right are Mr. Anjan Chatterjee, all of Booz, Allen & Hamilton's offices in New York.

You have our statement. I would just like to briefly summarize our overall views on the enrichment business, and then Mr. Tyre will make a few additional remarks and highlight a few other significant points.

It is clear, as you have pointed out, Mr. Chairman, and as other witnesses have pointed out, that the driving force for change in the U.S. approach to this business is the emergence of real and increasing competition for this worldwide market.

In our view, given this significant change, the current strategy and the current structure of this U.S. enterprise are inappropiate.

If they are not changed, they will essentially, over the next decade and a half, remove the U.S. from this business, and will not generate much near-term value for the Treasury either.

Several actions, in our view, are needed. First, there a number of reasonable strategies which can be undertaken which could either increase the near term return to the U.S. Treasury, or they could rebuild the enterprise's market position back closer to what it used to be; or they can build a reasonably stable, reasonably profitable viable business for the long run.

However, it is clear to us that not all of these objectives can be met simultaneously. It is necessary to choose what is wanted, and only then can a coherent strategy be designed and implemented.

Secondly, as has been pointed out, there are some major opportunity to reduce costs or increase value, regardless of the specific strategy that is undertaken, which have not yet been vigorously pursued by the enterprise, which could increase its near term value.

And finally, we believe that the enterprise needs to move away from its current agency status, as other witnesses have pointed out, if it is to have the flexibility, the focus and the long term stability needed to execute any effective business plan in this increaingly competitive environment.

STATEMENT OF ROBERT A. TYRE, VICE PRESIDENT, BOOZ, ALLEN & HAMILTON, INC.

Mr. **Tyre**. Mr. Chairman, I would like to comment on two essential issues. One is the business strategy, and the second is the organizational implications.

We looked at three basic options for business strategies. How to run this business in the future? We termed those harvest, maintain and grow.

Under the harvest, the approach would be to increase prices near term while reducing expenditures in investments. Essentially this would result in the highest cash flow for the enterprise over the early years. However, it runs the risk of the business being unviable in the later years.

Under a maintain sort of approach, the business would reduce prices to meet competition while at the same time making investments to put the business in a position where it would have a competitive cost structure in the future.

This business—this approach would enable the enterprise to retain its market share and to be a viable enterprise going out in the future.

We looked at a third approach, which we called the growth strategy, which was to reduce prices even further, below competition, in an effort to regain market share, while at the same time making investments to have a competitive cost structure in the future.

This could lead to a business which could be quite strong in the future. However it has the least value when measured in current terms.

Having looked at those different strategic options, we essentially were unable to recommend a particular approach to take because the objectives for running the business were not clear.

And it became crystal clear in our own minds anyway that a nonconflicting statement of the objectives for the business were critical for going forward.

With regard to the organizational structures, our view is that the current agency status is untenable. Instant privatization we see not only as possible resulting in low value today, but we also see it almost tantamount to deciding upon a harvest strategy.

Some form of government corporation we believe is the correct approach. It allows for the ability to fix the business and its current problems, while preserving the flexibility to take further actions in the years to come, such as to privatize.

That concludes our oral statement. My colleagues and I would be glad to answer any questions that you have.

[The prepared statement of Mr. Diamond follows:]

Statement of

Mitchell S. Diamond, Vice President
Robert A. Tyre, Vice President
Anjan Chatterjee, Principal

Booz, Allen & Hamilton, Inc.

Before

The United States Senate

Committee on Energy & Natural Resources
Subcommittee on Energy Research & Development

May 4, 1987

Introduction

- My name is Mitchell Diamond. I am a vice president with the consulting firm of Booz, Allen & Hamilton and focus most of my efforts on the energy and utility industries. I want to introduce my colleagues who are with me today.
    - Robert Tyre - a vice president with Booz, Allen, who specializes in merger and acquisition work and consults on corporate development and restructuring issues. Mr. Tyre and I directed the project on which this testimony is based
    - Anjan Chatterjee - a principal with our firm who specializes in strategy and operating improvement for technologically based companies. Mr. Chatterjee was the project manager for the assignment
- My colleagues and I are from Booz, Allen's offices in New York City and are all members of the firm's commercial business sector
- This testimony is based on an assignment we conducted at the request of Martin Marietta Energy Systems (MMES) during the Fall and the Winter 1986-1987
    - The objective of the project was to assist DOE and MMES to define and assess strategic business options for the Uranium Enrichment Activity (UEA).
    - In the conduct of the project we studied a variety of DOE and MMES internal materials on UEA, reviewed published reports and articles, had extensive discussions with many DOE and MMES staff involved in uranium enrichment and conducted numerous interviews with representatives of various organizations involved in the enrichment business -- including customers, suppliers, brokers and related organizations directly or indirectly involved in uranium enrichment.

Summary

The overall conclusions we reached from our project can be summarized as follows:

- The nature of the marketplace has changed from one in which UEA enjoyed monopoly status to one in which UEA faces real and increasing competition.

- The current strategy is not viable in this environment. The administration must change its strategy if it is to remain viable over the long term.
- Several different strategic options are available to UEA, each of which involves trade-offs between financial returns, market position, public interest objectives and risks.
- Without a clear agreement on the objectives for UEA, it is not possible at this time to identify which long term strategy is superior.
- Assuming a long term viable enterprise is desirable, reorganizing UEA away from its current agency status at this time is a step in the right direction and will ease some of the restraints currently inhibiting UEA's commercial competitiveness.
- While privatization alternatives are potentially feasible, we believe ownership of the new organization should remain with the government for the time being.

Findings

The key findings from our assignment can be briefly summarized as follows:

- While the Administration has somewhat stabilized its market position today, the enterprise is competitively vulnerable
    - The market is facing limited growth and should have excess capacity for the foreseeable future.
    - The "window of vulnerability" for UEA is in the mid-1990's when current customer contracts expire and competition will have the opportunity to displace UEA.
    - At that point in time UEA may be significantly cost disadvantaged unless a low cost technology can replace the current GDP's.
    - Competitors are aggresively committing to price discounts at this time for customers who give cancellation notices now and switch over to them in the mid-90's.
    - U.S. customers generally favor UEA, however, they are actively considering these competitive offerings.

- The Administration appears to be managing towards a conflicting set of objectives and its current (implicit) strategy therefore is not viable or optimal.
  - The conflict in objectives can be characterized as aiming to build a long term business without investment, and the strategy consists of dropping prices during the current contract period (to encourage customers to rollover existing contracts annually) while not investing in a lower cost technology.
  - Our assessment is that this strategy will result in a combination of low financial returns, continuing loss of market share and place UEA in the long term position of being the high cost producer.
- In addition, the enterprise is not taking advantage of several value creation opportunities which can significantly improve the financial condition of UEA
  - The excess uranium inventory could be sold (possible revenues $1.3 to $2.0 billion)
  - A program of building Separation Work Unit (SWU) inventory now (to capitalize on currently low marginal power costs and capacity utilization) for sale in later periods (possible savings $140 million)
  - Relief from TVA demand charges (could save over $2.0 billion in present value)
- Beyond these steps, there are three basic strategy options for running the business -- regardless of who owns it or how it is organized. These options involve pricing and investment alternatives -- yielding different market shares and economic consequences along with attendant risks.
  - Harvest: under this option UEA would take advantage of the current capacity limitations of its competitors, and increase prices while at the same time cutting overhead costs and minimizing investment expenditures. The objective would be to realize the highest near-term value for the enterprise. The long term outcome of this strategy would be a low and declining market share and a high manufacturing cost position.

- Maintain: This strategy would involve near term price concessions as required to forestall competition while investing in the development of a low cost position for the future. The objective would be to hold market share. A likely outcome of this strategy would be a viable uranium enrichment capability in the U.S., but somewhat less near term financial return

- Grow: To grow the business, UEA would significantly undercut competitive prices while investing in a low cost manufacturing position. The objective under this strategy would be to increase market share. The likely outcome of this strategy would be to minimize the economic value of the business but with an increased share of the worldwide market, long term

- The options present dramatically different risk-reward profiles

	Economic Value	Market Share Late '90's & Beyond	Risk
Harvest	High	Low	Low
Maintain	Medium	Medium	Medium
Grow	Low	High	High

- However, selecting a long term strategy from these options is difficult, if not impossible, given the current conflicts about objectives, budget constraints, and the desired long term target for the business

- Additionally, constraints imposed by the current agency status severely constrain the ability of the Administration to undertake a consistent long term competitive program of action

Conclusions

- The key is to resolve the objectives to be achieved with this national asset

- Assuming the objective is to maintain a domestic uranium enrichment activity while improving (but not maximizing) financial value, we believe several changes are required to position UEA to compete effectively in this worldwide commodity market. The key requirements are that UEA:
  - Have the flexibility to respond in a competitive manner to changes occurring in the marketplace
  - Develop a lower cost technology for the long run
  - Agree upon and implement a coherent long term strategic program
- It is important to note that our projections indicate that this combination of near and long term response will require running a debt in the short term to build a stronger market and financial position over the longer term
- We believe a change in the organization format is required as a first step, once a direction can be agreed upon
  - The current status is untenable
  - We believe "instant privatization" will likely jeopardize the long term viability of the business in the U.S. and may require a significant price discount from the economic value
  - A government corporation may be the best solution for now -- such a structure could allow the required "fixes" to be made (e.g., technology investments, commitment to a long term strategic plan, greater competitive flexibility), while preserving the option to privatize in the future
- Any new organization structure should:
  - Be established with the objective of creating a long term viable enterprise capable of meeting the competitive requirements of a changed marketplace.
  - Provide UEA the authority and responsibility necessary to manage the business in the new competitive environment.

BUSINESS CONFIDENTIAL

EXECUTIVE SUMMARY - DEVELOPING STRATEGIC OPTIONS FOR DOE'S URANIUM ENRICHMENT ACTIVITY

MARTIN MARIETTA

FEBRUARY 2, 1987

THIS REPORT IS CONFIDENTIAL AND INTENDED SOLELY FOR THE USE AND INFORMATION OF THE CLIENT TO WHOM IT IS ADDRESSED

BOOZ ALLEN & HAMILTON, INC.

PREFACE

THIS DOCUMENT SUMMARIZES THE RESULTS OF OUR STUDY TO DEVELOP AND ASSESS STRATEGIC OPTIONS FOR DOE'S URANIUM ENRICHMENT ACTIVITY...

- The work was awarded pursuant to subcontract #22K-22258V dated September 3, 1986 as modified on October 30, 1986
- This Executive Summary is organized as follows:

Reference

- Introduction 1-4
- Conclusions 5-14
- Strategies
  - Description 15-18
  - Evaluation 19
  - Risks 20-21
  - Additional Opportunities & Organizational Implications 22-23
- Summary 24

- The charts and exhibits herein are summarized from the detailed Appendix under separate cover

Introduction...

THE U.S. URANIUM ENRICHMENT ACTIVITY (UE) IS A SIGNIFICANT BUSINESS UNDERGOING MAJOR TRANSITIONS IN THE MARKETPLACE...

- The sheer size of the business is significant
  - World market of about $2.5B
  - UE annual revenues exceed $1.3B
  - UE has an estimated 46% share of the world market (volume) including 85% share of the U.S. market
- The emergence of several foreign government owned competitors has weakened DOE's traditional strength and monopoly position in the world market and led to major changes in the marketplace
  - DOE's share has declined from 100% to 46% over the last decade
  - There is excess capacity worldwide leading to increased price sensitivity among the customer base
  - Different technologies are being pursued by competitors which promise to reduce costs considerably below current levels
  - Several U.S. customers are buying from foreign competitors who have demonstrated reliability in overseas markets
  - Others are considering changing suppliers in the future

Introduction...

TO APPROPRIATELY ADDRESS THE REQUIREMENTS OF A CHANGING ENVIRONMENT, SOME IMPORTANT DECISIONS REGARDING UE OBJECTIVES ARE NECESSARY...

- The U.S. uranium enrichment activity is attempting to meet a conflicting set of financial and public interest objectives

- There is a lack of agreement on overall objectives which include:

    - Ensuring long term viability of UE - to meet national energy security and military needs for enriched uranium
    - Generating cash after covering operational costs to repay Treasury and contribute towards Federal budget deficit reduction goals
    - Enhancing the privatization potential of UE
    - Minimizing power costs to the population at large by reducing the costs of uranium enrichment

Introduction...

THERE ARE IMPORTANT AND VIGOROUS DEBATES ON THE OPTIONS FOR BEST ACCOMPLISHING UE'S VARIOUS OBJECTIVES. TOPICS BEING DEBATED INCLUDE:

- The overall strategy for meeting these objectives and how to price enriched uranium within this strategic context
- The amount and source of funding for R&D efforts
- The speed and desirability of privatization as a means towards these objectives
- Sourcing options for uranium and their fit with overall objectives

Introduction...

BOOZ ALLEN HAS BEEN RETAINED TO HELP DEFINE AND ASSESS THE STRATEGY OPTIONS THAT BEST FIT DESIRED OBJECTIVES FOR THE URANIUM ENRICHMENT BUSINESS...

- Our approach has been to
  - Develop an understanding of how the business is conducted
  - Assess the market and competitive forces facing UE
  - Understand the basic economics of the business and future investment possibilities
  - Consider the various strategic options for conducting the business in the future
  - Estimate the likely outcome of each major option
    - Qualitative (e.g. role in the industry, impact on customer/ competitors)
    - Quantitative (e.g. future financials)
  - Generally describe the organizational possibilities to enhance implementation of the strategic option
- Our objective has been to present an analytical framework to aid in making important policy decisions

Conclusions...Overview

OUR OVERALL CONCLUSION IS THAT A CHANGE IN STRATEGY AND ACCOMPANYING ORGANIZATION STRUCTURE IS DESIRABLE FOR THE FUTURE VIABILITY OF UE...

- The current approach is not fully responsive to market and competitive pressures - and suboptimizes enterprise value both from a financial and public interest viewpoint

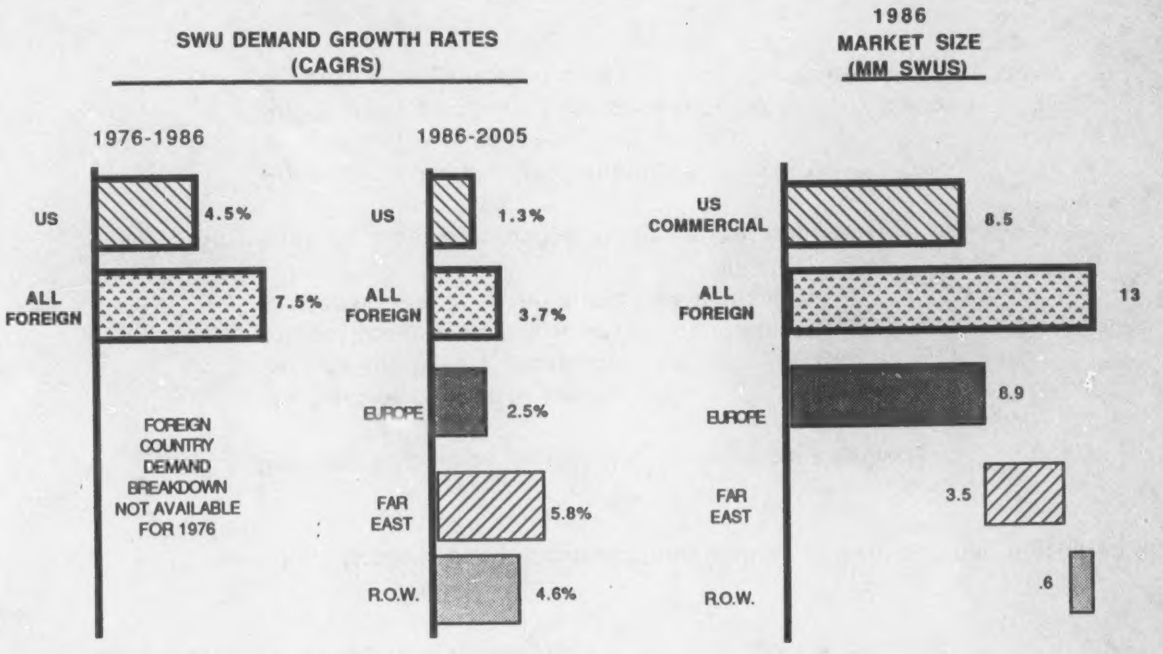
- Several strategy options are available for UE - no one option is clearly superior against all criteria as each involves tradeoffs between financial returns, market position, public interest objectives and risks. We considered options in three broad categories:

    - Harvest: Maximixe long term financial opportunities
    - Maintain: Ensure long term viability
    - Grow: Increase long term market share

Conclusions...Overview

HOWEVER, WITHOUT AGREEMENT ON THE OBJECTIVES FOR UE, IT IS IMPOSSIBLE TO DEVELOP AND IMPLEMENT A COHERENT STRATEGY...

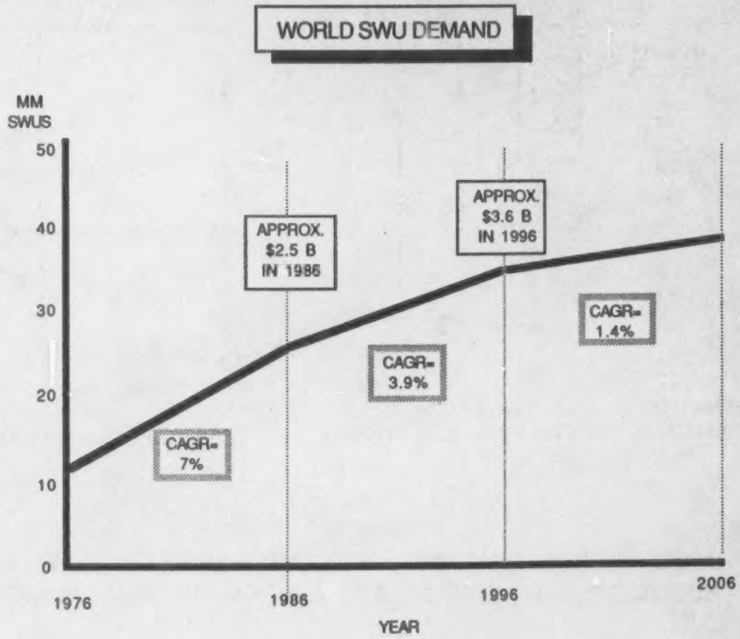
- The Administration, Congress, and others appear to have differing objectives for UE
- It is therefore impossible to manage the business effectively
  - No clear or consistent targets
  - No strategy is fully acceptable
  - Impossible to measure or reward performance
  - Customers are concerned and lose confidence
- To decide on a strategic option, it is necessary to:
  - Agree upon overall direction and UE objectives
  - Commit to the direction and adhere to it
  - Apply policy decisions consistent with the strategy pursued
  - Develop an organization structure best able to execute the strategy


SWU DEMAND GROWTH RATES
(CAGRS)
1976-1986
US
4.5%
ALL FOREIGN
7.5%
FOREIGN COUNTRY DEMAND BREAKDOWN NOT AVAILABLE FOR 1976
1986-2005
US
1.3%
ALL FOREIGN
3.7%
EUROPE
2.5%
FAR EAST
5.8%
R.O.W.
4.6%
1986
MARKET SIZE
(MM SWUS)
US COMMERCIAL
8.5
ALL FOREIGN
13
EUROPE
8.9
FAR EAST
3.5
R.O.W.
.6

SOURCE: DOE

Conclusions...Market

FOLLOWING EXPANSION IN THE 1970'S, THE MARKET HAS BEEN STAGNANT AND IS EXPECTED TO SHOW LITTLE GROWTH OVER THE NEXT SEVERAL DECADES...

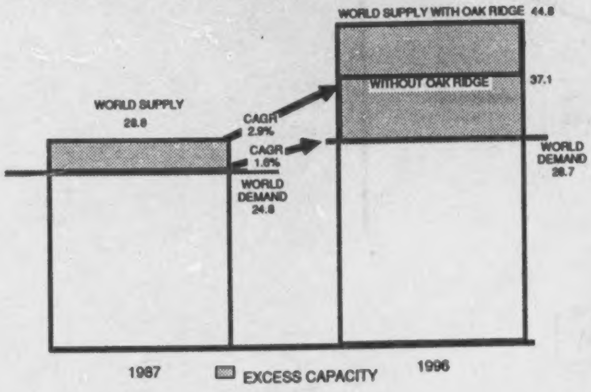


SOURCE: DOE

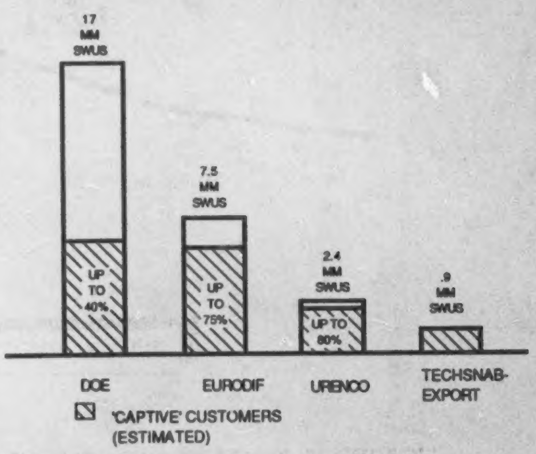
Conclusions...Market

THE MARKET WILL BECOME INCREASINGLY COMPETITIVE WITH DOE'S SHARE SIGNFICANTLY THREATENED AFTER 1995 (WHEN EXISTING CUSTOMER CONTRACTS EXPIRE)...

GROWING EXCESS INDUSTRY CAPACITY IN A STAGNANT MARKET POINTS TO INCREASED COMPETITION ...



DOE IS DOMINANT PLAYER BUT HAS RELATIVELY FEWER 'CAPTIVE'* CUSTOMERS ...



* For DOE, captive customers include our assessment of non-price sensitive customers
For competitors, captive customers include partner utilities in home markets

SOURCE: DOE, BAH analysis

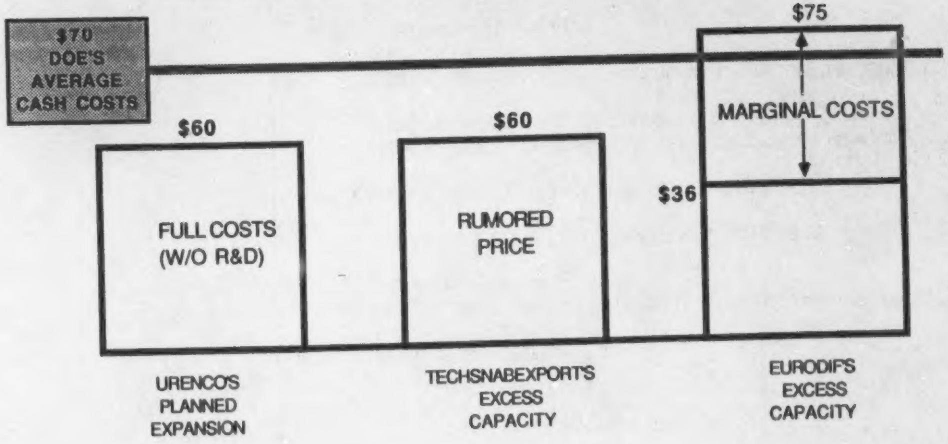
COST DEFINITIONS

- ALL COSTS ARE IN 1987 $
- ANALYSIS BASED ON DATA FROM DOE/MM FINANCIAL MODELS, & BAH INTERVIEWS
- DOE CASH COSTS-EXCLUDE CAPITAL & R&D COSTS
- URENCO FULL COSTS-ALL COSTS EXCEPT R&D
- TECHSNABEXPORT PRICE-EXPECTED PRICE (COSTS UNKNOWN) TO BE OFFERED TO DOE CUSTOMERS
- EURODIF MARGINAL COSTS-ADDITIONAL CASH COSTS INCURRED IN PROVIDING SWUs TO NEW CUSTOMERS (BEYOND CURRENTLY CONTRACTED CAPACITY)

Conclusions...Competition

COMPETITORS CAN USE THEIR EXPECTED COST DECLINES VIS-A-VIS DOE'S GDPs, AND THEIR ABILITY TO ADD SUFFICIENT CAPACITY, TO CAPTURE DOE'S CUSTOMERS BEYOND 1995...

1996 COST COMPETITIVENESS



SOURCE: DOE, BAH ANALYSIS

IN PARTICULAR, URENCO IS SEEKING CUSTOMERS/PARTNERS FOR A U.S. PLANT TO EXPLOIT ITS COST ADVANTAGE

Conclusions...Customer

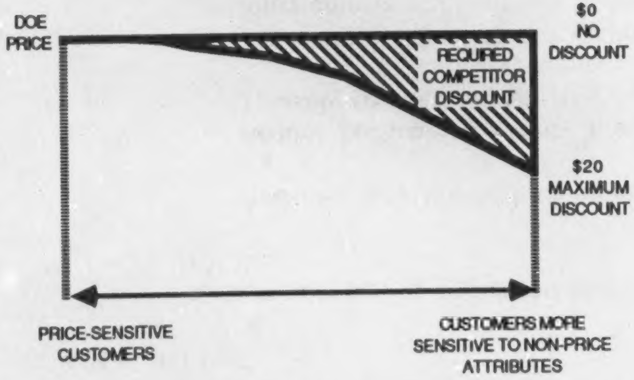
THERE ARE SIGNS OF GROWING CUSTOMER DISSATISFACTION WITH UE, PARTICULARLY IN THE U.S. - DESPITE THE FACT THAT MANY CUSTOMERS REMAIN LOYAL TO DOE...

- Customer concern is expressed in their desire to support competitors - to pressure DOE to:
  - Reduce prices to match those promised by competition in the mid-90's
  - Reduce political uncertainty in economic decision making, e.g. level of Treasury payment, AVLIS R&D
  - Act in a more 'commercial' manner by committing to a price and emulating other commercial suppliers in terms of accountability
- On the other hand, DOE still remains the favored supplier - especially in the U.S.
  - U.S. customers desire a strong DOE to counterbalance competition and assure supply
  - DOE's global political clout and its commitment to future price reductions - despite skepticism regarding their sustainability - has contributed towards helping DOE maintain a favorable supplier status in certain areas

Conclusions...Customer

DESPITE IMMINENT VULNERABILITIES, DOE'S FAVORED SUPPLIER STATUS MAKES IT NECESSARY FOR COMPETITORS TO OFFER A DISCOUNT - SUGGESTING A CUSTOMER PRICE ELASTICITY THAT CAN BE LEVERAGED TO DOE'S ADVANTAGE...

APPROXIMATE REQUIRED DISCOUNT FOR CUSTOMERS TO SWITCH TO NON-DOE SUPPLIER



SOURCE: CUSTOMER INTERVIEWS, DOE, BAH ANALYSIS

FINANCIAL IMPLICATIONS OF PRICE-MARKET SHARE TRADEOFFS

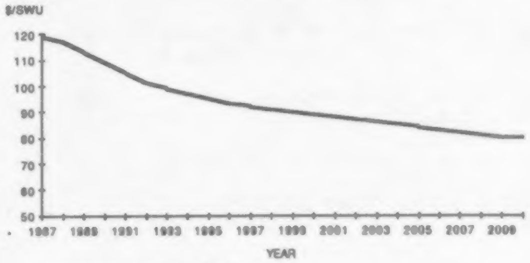
- Can raise relative prices, lose share, but increase value
- Can lower relative price, retain/ gain share, but sacrifice value
- The selected price can be based on what best optimizes financial value given these price market share tradeoffs

Conclusions...Customer

WITH TIME, THE NEED TO OFFER A DISCOUNT TO ATTRACT DOE'S CUSTOMERS WILL DECLINE; FURTHER, COMPETITORS' ABILITY TO PROVIDE SUCH A DISCOUNT WILL INCREASE - IMPLYING THAT NEAR TERM ACTION STEPS MAY BE APPROPRIATE FOR DOE TO CAPITALIZE ON THIS VALUE ENHANCING OPPORTUNITY...

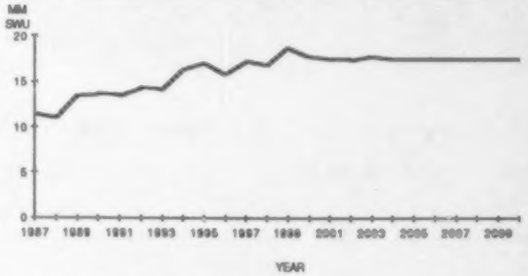
- Although customers currently favor DOE as a supplier, changes in underlying market forces will likely reduce their willingness to pay higher prices to DOE
  - Surety of supply and good working relationships with DOE will be less of an advantage as competitors begin establishing a U.S. track record starting with deliveries to Yankee and Boston Edison
  - 'Buy American'-ism may diminish if the URENCO production facility is built in the U.S. (concern over surety of supply may also diminish)
  - Growing sophistication of utilities should translate into more aggressive purchasing behaviour
- Also, the uncertainties that keep competitors from currently offering their most aggressive prices for the post 1995 time period will decline
  - Foreign exchange uncertainty and the costs of mitigating this risk naturally decrease as the bid date and the delivery date approach one another
  - Technology and cost uncertainty for competitors will diminish as R&D gets completed
  - Power cost uncertainty which may be a large issue for EURODIF will likely be resolved when its power rates are reestablished in 1992

CURRENT DOE PROPOSED BASE SWU ("TARGET") PRICING



SOURCE: DOE (FREE/MECCA MODELS)

CURRENT DOE PROPOSED TOTAL SWU ("TARGET") VOLUME*



SOURCE: DOE (FREE/MECCA MODELS)

*DOE TARGET VOLUME CAN BE ROUGHLY CONVERTED TO SHARE OF WORLD MARKET:
1987: 100% OF DOE TARGET = 46% OF WORLD MARKET
1996: 100% OF DOE TARGET = 46% OF WORLD MARKET
2005: 100% OF DOE TARGET = 45% OF WORLD MARKET

MARKET SHARE NUMBERS USED HEREAFTER ARE COMPUTED AS ABOVE

Conclusions...Current Strategy

DOE'S CURRENT STRATEGY IS AIMED AT PROVIDING RETURNS TO THE TREASURY WITHOUT PURSUING LOW COST PRODUCTION OPTIONS...

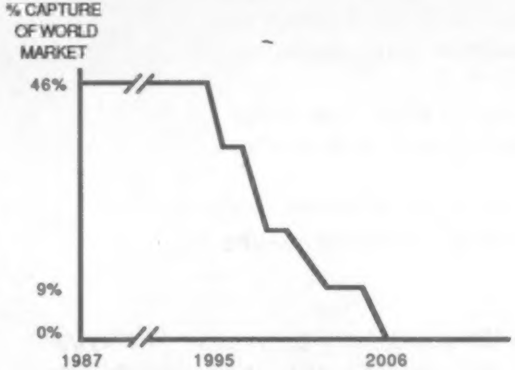
- The current pricing strategy (the 'DOE target price') is to drop prices over time but recover operational costs and provide a $3.3B payment to the Treasury
    - Implicit in this pricing strategy is the assumption that DOE will retain about 50% share of the world market (the 'DOE target volume')
    - No further price initiatives are currently planned - customers are expected to annually roll over existing contract commitments
    - The target prices (1987 - 2010) does not, however, provide for recovery of Decontamination and Decommissioning (D&D) of GDP facilities which is likely to occur after 2010
- In addition, all AVLIS funding will cease by 1988 - implying that all future sales would be from GDP facilities

CURRENT STRATEGY

(ALSO REFERRED TO AS BASE W/O AVLIS)

KEY ASSUMPTIONS
- PRICING
  - -1987-2005: DOE PLANNED PRICING CURVE
  - -2006 & BEYOND: N/A AS DOE IS OUT OF THE BUSINESS
- AVLIS
  - -STOP R&D BY 1988
  - -CURRENT BUDGET: $80 M('87); $35 MM ('88)
- SEE APPENDIX FOR FULL QUANTITATIVE MODEL & LIST OF ASSUMPTIONS

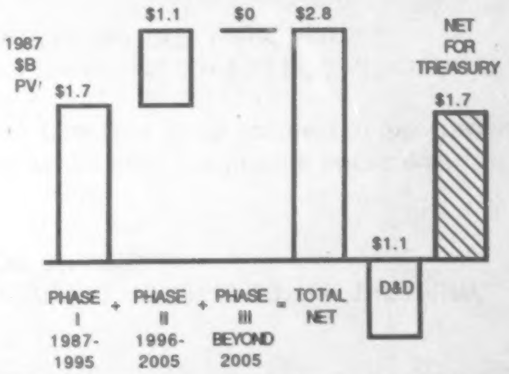
LOSE MARKET SHARE/EXIT BUSINESS AFTER 1995



SOURCE: DOE, BAH ANALYSIS

UNLIKELY TO MEET FINANCIAL OBJECTIVES

(BAH ESTIMATES OF PRESENT VALUE OF FUTURE CASH FLOWS) @4% REAL DISCOUNT RATE FOR DOE

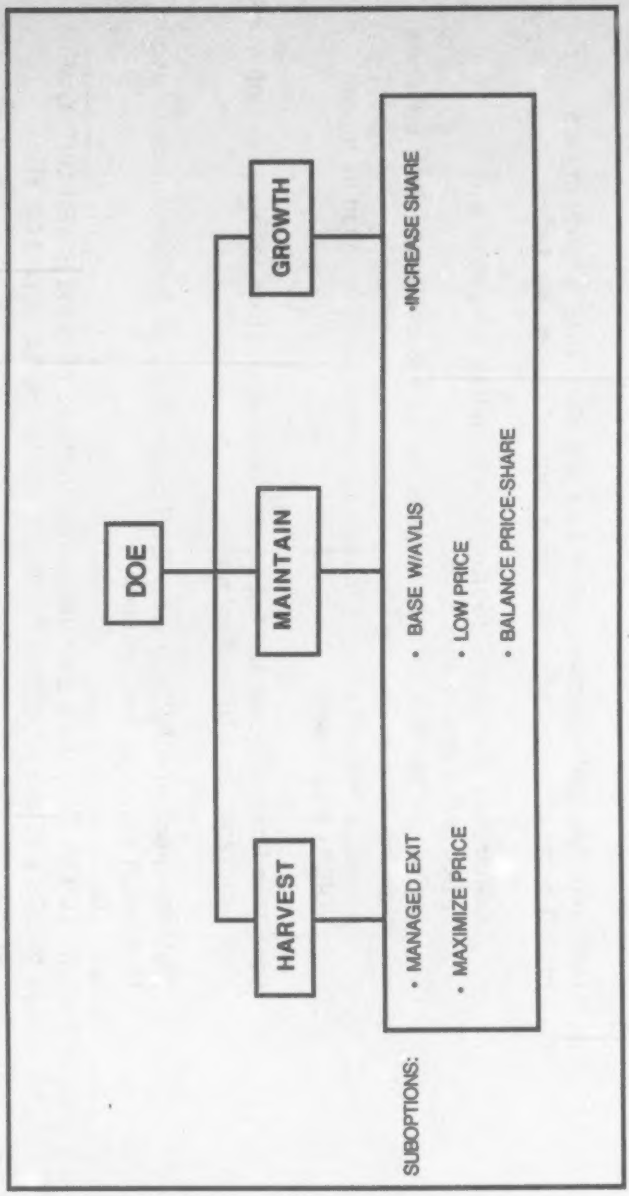


Conclusions...Current Strategy

OUR ASSESSMENT IS THAT DOE'S CURRENT STRATEGY IS UNLIKELY TO MEET DESIRED OBJECTIVES FOR THE ENRICHMENT ENTERPRISE...

- Near term financial objectives will not be met since DOE is likely to lose market share after expiration of current contract period (see facer)
    - Competitors are currently willing to offer prices consistent with customers' discount expectations
    - Customers perceive DOE to be inflexible and inconsistent - thus furthering their intention to develop strong second sources of supply
    - Indeed, a wave of short term contract terminations, intended to 'signal' DOE, is highly likely
- Long term financial goals will not be met because of share losses stemming from cost disadvantaged GDP technology
- Discontinuation of AVLIS will leave DOE permanently cost disadvantaged - and is tantamount to exiting the business

NEW STRATEGIC OPTIONS WILL BE EVALUATED VERSUS THIS EXPECTED OUTCOME TO JUDGE WHICH OPTION BEST MEETS THE OVERALL OBJECTIVES FOR THE ENRICHMENT ENTERPRISE



DOE
HARVEST
MAINTAIN
GROWTH
SUBOPTIONS:
· MANAGED EXIT
· MAXIMIZE PRICE
· BASE W/AVLIS
· LOW PRICE
· BALANCE PRICE-SHARE
·INCREASE SHARE

Strategy...Overview

THERE ARE THREE BASIC STRATEGY OPTIONS (WITH SEVERAL SUBOPTIONS) AVAILABLE TO DOE - EACH OPTION SERVES A SUBSET OF THE DESIRED GOALS AND OBJECTIVES AND NECESSITATES TRADEOFFS BETWEEN FINANCIAL AND PUBLIC INTEREST OBJECTIVES...

	Strategic Options	Thrust
•	Harvest the business -Managed exit -Maximize price	Disinvest and withdraw in a managed fashion, to maximize financial returns from the business
•	Maintain the business -Base with AVLIS -Low price -Balance price/share	Reinvest, to maintain U.S. share of the world market thus ensuring long term viability of a U.S. based enrichment enterprise
•	Grow the business -Increase share	Reinvest and price aggressively, to regain world market control to further ensure long term viability

A QUANTITATIVE MODEL HAS BEEN DEVELOPED TO ANALYZE THESE OPTIONS. ASSUMPTIONS INCLUDED IN THIS MODEL WERE DERIVED FROM OUR FIELD WORK AND IN HOUSE DATA AND ARE SHOWN IN THE APPENDIX TO THIS DOCUMENT

STRATEGIC OPTION : HARVEST

KEY ELEMENTS

SUB -OPTION	REQUIRED DOE ACTIONS	TIMING OF ACTION	DOE PRICES PHASE I 1987 to 1995	PHASE II 1996 to 2005	PHASE III 2006 ...	FUND AVLIS
MANAGED EXIT	• OFFER PREEMPTIVE PHASE II PRICE($86) TIED TO A $5 DISCOUNT IN PHASE I FROM CEILING	1987	$115	$86	N/A	NO
MAXIMIZE PRICE	• PRICE AT $120 CEILING • FOLLOW DOE TARGET PRICES +$25	1987-1995 1996-2005	$120	DOE + $25	N/A	NO

OUTCOMES

SUB -OPTION	VOLUME: % of WORLD MARKET PHASE I 1987 to 1995	PHASE II 1996 to 2005	PHASE III 2006 ...	TOTAL GROSS PV ($ Bill)	Net PV From Operations After AVLIS R&D & Cap Expd I	II	III	TOTAL NET AFTER AVLIS	... & after D&D AVAIL. TO TREASURY	UEA 2006 and beyond
MANAGED EXIT	46%	37%	0%	$4.1	$2.4	$1.6	$0	$4.0	$2.9	NO UEA NO AVLIS
MAXIMIZE PRICE	46%	9%	0% by 2003	$4.0	$2.7	$1.2	$0	$3.9	$2.8	NO UEA BY 2003 NO AVLIS

DEFINITIONS OF KEY PRICING CONCEPTS

PREEMPTION : : MEANS OFFERING A GUARANTEED FIXED PRICE FOR 1996-2006 BY END OF 1987, BEFORE COMPETITORS MAKE A SIMILAR CONTRACT OFFER

PHASE I DISCOUNT : TO ENHANCE ACCEPTANCE, A DISCOUNT MAY BE OFFERED FOR 1987-1995 PRICES IF THE PREEMPTIVE OFFER (1996-2005 CONTRACT) IS ACCEPTED

Strategy...Harvest

THE HARVEST STRATEGY IS DESIGNED TO EXIT THE BUSINESS - THE SUB-OPTIONS EXAMINED ARE AIMED AT REGULATING THE SPEED OF EXIT WHICH IMPACTS CASH FLOW TO THE TREASURY AND THE TIME AVAILABLE TO CUSTOMERS FOR DEVELOPING ALTERNATE SOURCES...

- The managed exit option generates significant cash for the Treasury (approximately $2.9B) with DOE disinvolved from the business around 2005. Key elements of this option include:
  - Charge near ceiling prices until 1995
  - In the short term, offer a future long term fixed price contract (preemption)* to lock in customers between 1995 and 2005
  - Halt AVLIS development

- The maximize price option is designed to keep prices as high as possible in a conscious attempt to 'milk' the business. Key attributes of this option include:
  - To maximize cash generation as quickly as possible
  - total withdrawal from the business around 2003
  - Possible loss of customer goodwill as they realize the overall intent of the strategy

* DEFINITIONS OF KEY PRICING CONCEPTS

PREEMPTION :MEANS OFFERING A GUARANTEED FIXED PRICE FOR 1996-2006 BY END OF 1987, BEFORE COMPETITORSMAKE A SIMILAR CONTRACT OFFER

PHASE I DISCOUNT : TO ENHANCE ACCEPTANCE, A DISCOUNT MAY BE OFFERED FOR 1987-1995 PRICES IF THE PREEMPTIVE OFFER (1996-2005 CONTRACT) IS ACCEPTED

STRATEGIC OPTION : MAINTAIN

KEY ELEMENTS

SUB -OPTION	REQUIRED DOE ACTIONS	TIMING OF ACTION	DOE PRICES PHASE I 1987 to 1995	PHASE II 1996 to 2005	PHASE III 2006 ...	FUND AVLIS
BASE WITH AVLIS	• FOLLOW DOE TARGET PRICES FOR PHASE I & II • CONTINUE WITH ROLLING CONTRACTS • PRICE AT MARKET FOR PHASE III	1987-2005 FROM 2006	$119...$95	$93...$84	$50	YES
BALANCE PRICE/ SHARE	• OFFER PREEMPTIVE PHASE II PRICE ($86) TIED TO A $10 DISCOUNT FROM CEILING IN PHASE I • PRICE AT MARKET FOR PHASE III	1987 AROUND 2000	$110	$86	$50	YES

OUTCOMES

SUB -OPTION	VOLUME: % of WORLD MARKET PHASE I 1987 to 1995	PHASE II 1996 to 2005	PHASE III 2006 ...	TOTAL GROSS PV ($ Bill)	Net PV From Operations After AVLIS R&D & Cap Expd I	II	III	TOTAL NET AFTER AVLIS	... & after D&D AVAIL. TO TREASURY	UEA 2006 and beyond
BASE WITH AVLIS	46%	21%	14%	$3.9	$.9	$.4	$1.0	$2.3	$1.4	SMALL UEA AVLIS RUNNING
BALANCE PRICE/ SHARE	46%	46%	39%	$6.0	$1.2	$.4	$2.1	$3.8	$2.9	LARGE UEA AVLIS RUNNING

DEFINITIONS OF KEY PRICING CONCEPTS

PREEMPTION : : MEANS OFFERING A GUARANTEED FIXED PRICE FOR 1996-2006 BY END OF 1987, BEFORE COMPETITORS MAKE A SIMILAR CONTRACT OFFER

PHASE I DISCOUNT : TO ENHANCE ACCEPTANCE, A DISCOUNT MAY BE OFFERED FOR 1987-1995 PRICES IF THE PREEMPTIVE OFFER (1996-2005 CONTRACT) IS ACCEPTED

Strategy...Maintain

THIS STRATEGY IS DESIGNED TO MAINTAIN AN ONGOING ENRICHMENT ENTERPRISE. WE BELIEVE A LOW COST TECHNOLOGY IS REQUIRED TO EXECUTE THIS STRATEGY - THE SUBOPTIONS EXAMINED REPRESENT DIFFERENT MARKET SHARE OR CASH FLOW APPROACHES...

- The base with AVLIS option is an extension of the current strategy except that the AVLIS program is maintained to allow DOE to be cost competitive in the long term. This option will likely result in a smaller business for DOE with the following attributes:
    - Some cash generation for the Treasury (approximately $1.4B) due to long term retention of market share
    - Failure to guarantee Phase II prices early leads to decline in market share after current contract period (to around 21% of world market)
    - Possibility of continuing share declines even after AVLIS is operational - expected to stabilize around 14% of world market on a long term basis
- The balance price/share option is aimed at maintaining the current customer base (approximately 39% of world market) and generating additional cash for the Treasury (approximately $2.9B). Key elements include:
    - Price preemptively to capture customers now, for the next contract period i.e. offer a guaranteed fixed price for 1996-2006 now (in 1987)
    - 'Sweeten' preemptive offer with a sizable current discount valid until the end of this contract
    - Use of preemptive pricing locks in customers, therefore keeping high market share in Phase II and III
    - Invest in AVLIS to maintain customer base in subsequent contract periods

STRATEGIC OPTION : GROWTH

KEY ELEMENTS

SUB -OPTION	REQUIRED DOE ACTIONS	TIMING OF ACTION	DOE PRICES			FUND AVLIS
			PHASE I 1987 to 1995	PHASE II 1996 to 2005	PHASE III 2006 ...	
INCREASE SHARE	• GUARANTEE DOE TARGET PRICES FOR PHASE I	1987-1995				
	• OFFER FIXED PHASE II PRICES BELOW COMPETITORS' MARGINS	1996-2006	$119...$95	$60	$43	YES
	• OFFER BELOW MARKET PHASE II PRICES	2006...				

OUTCOMES

SUB -OPTION	VOLUME: % of WORLD MARKET			TOTAL GROSS PV ($ Bill)	Net PV From Operations After AVLIS R&D & Cap Expd			TOTAL NET AFTER AVLIS	... & after D&D AVAIL. TO TREASURY	UEA 2006 and beyond
	PHASE I 1987 to 1995	PHASE II 1996 to 2005	PHASE III 2006 ...		I	II	III			
INCREASE SHARE	46%	56%	48%	$3.5	$.9	($1.7)	$1.9	$1.1	$0.2	LARGE UEA AVLIS RUNNING

Strategy...Growth

THE GROWTH OPTION ATTEMPTS TO INCREASE THE SIZE OF THE BUSINESS THROUGH AGGRESSIVE PRICING...

- To capture an increased number of customers for the life of this strategy, 'rock bottom' pricing is required as is financing of AVLIS development in Phase II
    - Until AVLIS is operational intent is to price at competitors' expected production costs to increase share of market
    - Aggressive pricing (below competitive levels but above production costs) of AVLIS based production to retain/increase market share
- Likely outcomes of this option are:
    - Gain share in the next contract period (estimated at approximately 56% of world market)
    - Essentially maintain DOE target share after AVLIS deployment (share will be dependent on relative competitiveness of AVLIS)
    - Overall, marginally positive net cash flow estimated at $0.2B

INSTITUTIONAL SUMMARY OF DOE STRATEGIC OPTIONS

	GOALS				
OPTIONS	ENERGY SECURITY & MILITARY NEEDS	MINIMIZE CUSTOMER COSTS	REPAY TREASURY/ REDUCE DEFICIT	INSURE LONG-TERM VIABLE BUSINESS	ENABLE PRIVATIZATION
HARVEST					
- Managed Exit	◐	◐	●	○	◐
MAINTAIN					
- Balanced Price/Share	●	◐	◐	●	●
GROWTH					
- Increase Share	●	●	○	◐	◐

● FULFILLS GOAL
◐ PARTIALLY FULFILLS GOAL
○ DOES NOT FULFILL GOAL

Strategy...Evaluation

THREE SUB-OPTIONS APPEAR SUPERIOR - HOWEVER, SINCE EACH SUB-OPTION IS BEST FOR A SPECIFIC SET OF GOALS, THE STRATEGY CHOICE SHOULD BE GUIDED BY THE POLICY DECISION REGARDING UE OBJECTIVES...

Harvest - Managed Exit	. Succeeds in disinvolving the government/DOE from direct participation in the enrichment business with significant returns to the U.S. Treasury - Provides higher returns to Treasury relative to other harvest option - Controlled exit allows customers to establish alternate supply sources - Enhances the possibility that another U.S. owned entrant might fill the void created by DOE thus enabling privatization
Maintain - Balance Price/Share	. Ensures long term viable business for DOE based on cost-competitive technology without subsidization of the business - Provides highest returns to Treasury relative to other 'maintain' options - Implies some share loss - to provide higher returns - but results in a comparable (relative to current levels) long term business - Maintains DOE market share until 2006 when some share is lost due to Japanese desire for domestic production - Provides a sizable, profitable business for the Government to sell
Growth - Increase Share	. Ensures long term viability of business with large share, worldwide - Provides low cost enriched uranium to utilities - Large business will likely be more attractive to buyers, however, negative cash flow in Phase II substantially reduces overall returns to Treasury

DEFINITIONS Volume: % of DOE target (2006 & beyond) PV: Present Value (1987 $) of cash available to Treasury after all costs Results for worst case (regret) are compared to 'likely' case	**RISKS**		
	LOWER VOLUME CAPTURED	**AVLIS FAILS TO WORK**	**AVLIS COSTS MORE**
HARVEST-MANAGED EXIT	Volume: Capture 40% instead of 80% Of 1996-2005 Average Volume PV: $1.9B instead of $2.9B	N/A (No AVLIS Investment after 1988)	N/A
MAINTAIN-BALANCE PRICE/SHARE	Volume: Capture 56% instead of 86% PV: $2.0B instead of $2.9B	Volume: Out of business from 2006, but '87-'05 volume unaffected PV: $1.9B instead of $2.9B	Volume: Capture 86% per Likely case PV: $1.7B instead of $2.9B
GROWTH-INCREASE SHARE	Volume: Capture 76% instead of 90% PV: ($0.5) B instead of $0.2 B	Volume: Out of business from 2006, but '87-'05 volume unaffected PV: ($1.0) B instead of $0.2 B	Volume: Capture 90% per Likely case PV: ($1.7 B) instead of $0.2 B

Strategies...Risks

THERE ARE RISKS INHERENT IN EACH OF THESE OPTIONS AFFECTING THE VOLUME OF BUSINESS AND/OR THE RETURNS TO TREASURY*...

- Capturing lower volume than anticipated will reduce the return to Treasury under all the strategic options considered. This risk stems from:

  - DOE prices which are too high relative to competitive offers
  - Non-price aspects of the offer make it unattractive
  - Customers uncertain of DOE's commitment to and proper implementation of the option selected

- If AVLIS fails to meet commerical requirements, DOE will be forced out of business; if, on the other hand, AVLIS is delayed or costs more, returns to Treasury will decline commensurately. These risks may stem from:

  - Inherently flawed technology, i.e. works in a laboratory setting but does not meet commercial requirements at full production scale
  - Inadequate and/or erratic levels of funding
  - Misfocused program management - predominantly technical versus commercial orientation
  - Inefficient plant deployment after establishing technical feasibility

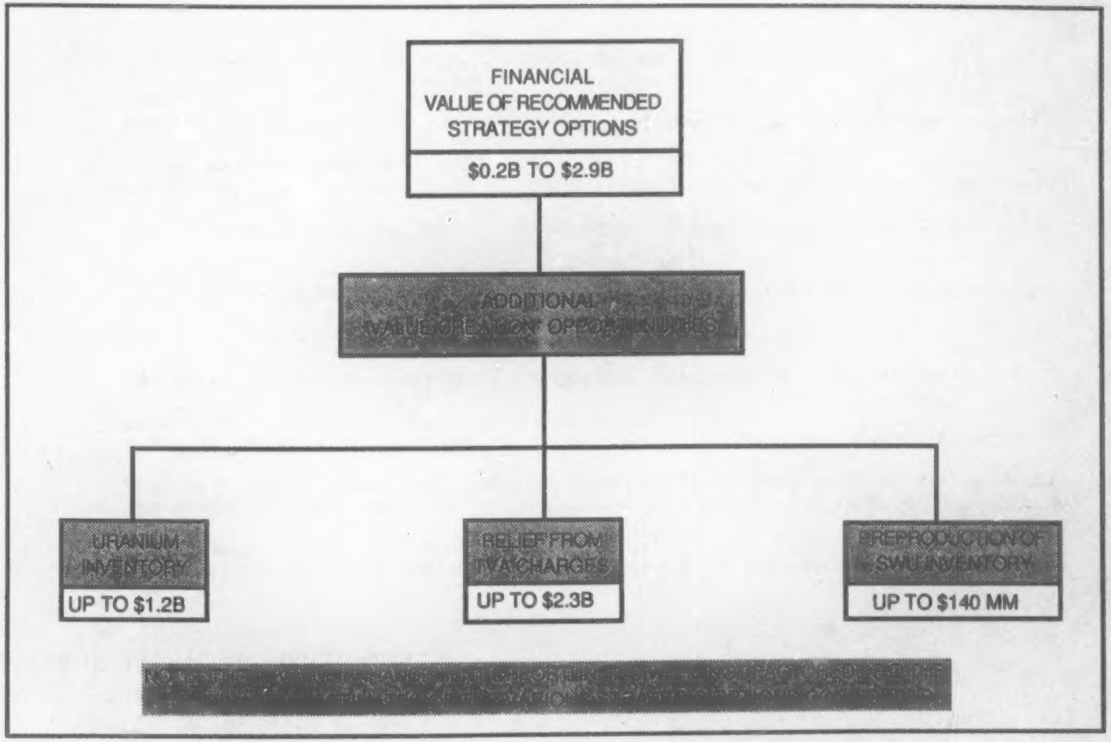
*See facer for estimated financial impact of volume and AVLIS related risks

ON THE OTHER HAND, ACCELERATION OF AVLIS DEPLOYMENT IS WORTHWHILE AND GENERATES $0.2B-$0.5B FOR EACH YEAR OF ACCELERATION

Strategies...Risks

THESE RISKS CAN BE MITIGATED SOMEWHAT...

- A preemptive pricing approach reduces the risk of losing share
- Test market pricing options with a small sample of customers and fine tuning as appropriate should be considered as a means for reducing volume uncertainties
- Additionally, committment to overall objectives and continuity of policy can be demonstrated in a number of ways:
  - Increase contract flexibility to allow customers a reasonable way out if original contract terms were to substantially change
  - Speedy resolution of unrelated issues (e.g. foreign uranium issue) could be used to demonstrate commitment to the long term health of the nuclear industry
  - Restructuring of the enrichment business - to achieve the actions consistent with a commercially oriented business - could signficantly demonstrate long term commitment and continuity
- Risks regarding AVLIS can be contained through:
  - Program modification to gain early GO/NO GO information on technological and commercial viability
  - Changing program objectives so that commercial objectives have higher priority
  - Developing contingency plans, as necessary
  - Committing to adequate and stable levels of program funding



FINANCIAL
VALUE OF RECOMMENDED
STRATEGY OPTIONS

$0.2B TO $2.9B

[illegible] ADDITIONAL [illegible]
VALUE CREATION OPPORTUNITIES

URANIUM
INVENTORY

UP TO $1.2B

RELIEF FROM
TVA CHARGES

UP TO $2.3B

PREPRODUCTION OF
SWU INVENTORY

UP TO $140 MM

[illegible]

Strategies...Additional Opportunities

THE BUSINESS CURRENTLY OFFERS SEVERAL BILLION DOLLARS OF ADDITIONAL "VALUE CREATION" OPPORTUNITIES - WHICH CAN SIGNIFICANTLY CONTRIBUTE TOWARDS FINANCIAL OBJECTIVES...

- DOE has excess uranium inventory which could generate a net present value of up to $1.2B if utilitzed differently
  - The excess inventory, nearly 34,000 metric tons, is currently being used in the enrichment process to reduce power costs (expected cost savings of about $800MM over 24 years)
  - The difference between the projected market value and internal usage value of excess uranium is equivalent to $1.2B of available additional value
  - Resolution of this issue need to be coupled with other uranium sourcing and mining issues
- Relief from TVA demand charges could save up to $2.3B (present value)
  - Partly because of past contracts, DOE is required to pay TVA fixed demand charges for power that is neither needed nor delivered
  - DOE is currently examining ways to renegotiate or reduce its obligations to TVA
- Preproduction of SWU inventory in the years (up to 1991) with low TVA variable charges for power could save approximately $140MM
  - Takes advantage of the low marginal power costs and low capacity utilization in these years
  - May require borrowing flexibility to provide for higher cash requirements

CHANGING FROM ITS CURRENT AGENCY STATUS CAN ENHANCE VALUE CREATION OPPORTUNITIES FOR UE...

- As an agency, UE is constrained, in a commercial sense
  - Long range plans are subject to reversals and are driven by annual Federal budget priorities versus UE priorities
  - It is difficult to maintain confidentiality of business plans/competitive strategies
  - The lengthy political approval process slows responsiveness and decision making

- Under a government corporation or an even more privatized ownership, the proposed strategies are likely to be executed more effectively
  - AVLIS R&D can be adequately and consistently funded and closely managed to most efficienly achieve deployment (vital for maintain and growth strategies)
  - Long term contract price commitments could become more credible to customers (critical for preemptive price offers)
  - UE could more quickly respond to market changes to ensure the long term success of the proposed strategies
  - Management can focus attention on customers and competitors rather than on broad political objectives

- Also, a change away from the current structure may better allow UE to undertake actions which may be currently viewed as politically sensitive

Summary...

IN SUMMARY, AGREEMENT MUST BE REACHED ON THE OBJECTIVES FOR UE, AND A COHERENT STRATEGY MUST BE SELECTED AND CONSISTENTLY IMPLEMENTED TO ACHIEVE THESE ENDS...

- **The current lack of agreement on the objectives for UE makes it impossible to develop and implement a coherent strategy**

- **Under the current strategy, DOE is unlikely to meet desired objectives for UE, resulting in DOE exitting the business by 2006**

    - **Returns to Treasury during this period will be inadequate**
    - **A long term competitive cost position will not be developed**

- **Three strategic options appear superior - each for a specific set of goals:**

    - **Harvest - Managed Exit**
    - **Maintain - Balanced Price/Share**
    - **Growth - Increase Share**

- **The ultimate strategy choice should be guided by policy decisions regarding UE objectives**

- **Changing away from the current agency status can enhance the likelihood of success of the selected strategy**

Senator **Ford**. Thank you very much, Mr. Tyre.

Let me ask you this question very frankly up front. To what extent is your work and your testimony an independent view of the situation in the enrichment industry, and how much reflects the views of the Department of Energy?

Mr. **Tyre**. Mr. Chairman, we conducted this assignment in the same manner that we conduct any commercial assignment for clients that we take on.

We worked with our client, with regard to getting information from them. They provided a great deal of reports which we asked for.

There was essentially no material that we asked for that was not provided. We also did a great deal of interviewing in the marketplace, talking to customers, brokers, and various people in the industry, and supported all of our findings by field—or did a great deal of field research which gave us a high degree of confidence in the findings that we made.

Senator **Ford**. Over what period of time did you conduct your study? How long did it take you to do it?

Mr. **Tyre**. We began in September. I am not sure of the exact start date.

Senator **Ford**. September of 1986?

Mr. **Tyre**. September of 1986, and it ran through January of 1987.

Senator **Ford**. So roughly four months.

Mr. **Tyre**. Four months, yes, sir.

Senator **Ford**. How real is the competitive threat to DOE by foreign competitors in the world market.

Mr. **Tyre**. I think it is important to understand that the threat is the 1995 and going forward timeframe, because the customers are essentially locked into 10-year contracts today.

Senator **Ford**. You are talking about seven years. That is not very long. It is a long time for a youngster; not very long for an oldster.

Mr. **Tyre**. We see price competition, and we talked to competitors. They are receiving quite attractive prices from competitors, some of whom are interested in setting up plants in the United States.

And in our opinion, once you start to see price competition, that is the definition of a competitive marketplace.

Senator **Ford**. Well, then, you see real evidence that foreign competitors are willing to increase their share, and attempt to increase their share, of the enrichment market, particularly here in this country?

Mr. **Tyre**. Yes, sir.

Mr. **Diamond**. Yes, sir. I think it is important to recognize that the United States market is the essential market in which competition is likely to take place, because it is the market which is most open and available to all competitors, and therefore the signs that foreign competitors are approaching U.S. utilities with attractive offers now, and suggesting that they not renew their DOE contracts are very real indications of future significant competition.

Senator **Ford**. You made one statement there, as part of your statement, that this is the only country that is open to competition. Are other countries closed?

Mr. **Diamond**. This is the largest market which is freely available to competition.

Senator **Ford**. Freely available to competition.

Mr. **Diamond**. There are other markets in which the use of enriched uranium is closely tied to national suppliers.

Senator **Ford**. And you say the timing is 1995, because of the contracts.

If the Department of Energy has been successful in stabilizing market, reducing its prices, arresting market erosion as you state in your testimony, why is restructuring an imperative, that is, why do we need to change the organizational structure that we now have and privatize it

Mr. **Tyre**. I believe there are two parts to that.

Senator **Ford**. You could make three out of it if you want to.

Mr. **Tyre**. Well, we might; there are three of us.

First of all, the—I forgot the question.

Senator **Ford**. I will try it again.

If the Department of Energy has been successful in stabilizing the market—I am talking about under the present structure—reducing their prices, and arresting the erosion that we now see in the enrichment industry that the United States now has, as you state in your testimony, why is restructuring imperative?

Mr. **Tyre**. Well, first, we believe that a strategy change is necessary, because the customers right now are making decisions whether they will hand in cancellation notices and retain the option of going to competitors in the post-1995 time period.

And frankly, under the approach that is presently being followed by the uranium enrichment activity, that is, the jeopardization of a low cost technology, the customers are concerned that the business will not be competitive in that timeframe. So a change in strategy is necessary.

Furthermore, the way that the enterprise is operated today, with all the attendant problems of an annual budget cycle, an annual capital expenditure approach cycle, the business cannot make long term investments and stick to a long term program, which is necessary in this industry because it is a long term cycle.

Senator **Ford**. Even though they changed their strategy, the other impediments would keep it from being a viable entity, is that what you are saying?

Mr. **Diamond**. Well, customers are concerned. And they have expressed concern to us about——

Senator **Ford**. Well, they have expressed it openly right here, where you are sitting.

Mr. **Diamond** [continuing]. That no matter what the Agency is prepared to say, they are not convinced under the current structure the Agency has the authority to maintain that position over the long run.

And they are looking for a long run commercial approach to this business. They are looking for commitments which are similar to the commitments they get from other commercial suppliers. And they are looking for some assurances that in the 1990s, when they need to convert their contracts, the enterprise will have in place an attractive, competitive manufacturing process that will assure them of supply.

And foreign competitors are offering them those things, and they want it from the United States as well.

Senator **Ford**. Let us look at the options then on the three basic strategies and suboptions that you examined.

Which strategy most nearly approaches the one that the Administration is now pursuing?

Mr. **Tyre**. We would have to characterize it as a harvest strategy.

Senator **Ford**. As what?

Mr. **Tyre**. A harvest strategy.

Senator **Ford**. A harvest?

Mr. **Tyre**. A harvest strategy.

Senator **Ford**. Explain the harvest strategy. To a country boy, that is gleaning the seed that you sowed in the spring.

Mr. **Tyre**. Harvest means grab the money while you can, and do not worry about the long term viability of the business; actually, to milk the business.

The current approach, as we understand it, is a milk the business approach in that investments are not being made to develop the low cost approach or technology in the future.

It is an interesting combination, actually, of that plus not maximizing the price but reducing the price.

So it is sort of a poorly executed harvest strategy.

Mr. **Diamond**. In a well executed harvest strategy, the enterprise would hold prices up while not investing and maximize returns to the treasury.

What they are doing is reducing prices to hold customers, but not offering the customers a long term viable business.

So they are both reducing the value of the enterprise and they are not investing in its future.

Senator **Ford**. You have other strategies in there. Will you explain those, too?

Mr. **Tyre**. Yes, sir. There is a maintenance strategy where prices are reduced to meet the competitive threat; at the same time, investments would be made to develop a technology so that the business could be cost competitive in the future. That is the maintenance strategy.

A growth strategy would be to cut prices even below competition to regain market share, at the same time again making the investments for the cost position in the future.

Senator **Ford**. We discussed a moment ago, and I hope you were listening to it, where I have a concern that the harvest—if you have a very poor enterprise out there, and it is not worth very much, and the strategy is not good, and has not changed, and that sort of thing, would we be better off to go in phases into the privatization of the uranium enrichment enterprise we now have, or would it be better just to make the quantum leap and go on and do it?

Somehow or another there is some nervousness about government going all the way by those who work in the enterprise, and our constituency also.

Now, TVA, we have talked about them here today, but TVA is not accountable, and under the Ford-Johnston provision, we make this organization accountable.

We also still maintain some control over it, because you have to report to the Secretary of Energy. That is one. And we still have the approval of the appointment to—for the executive vice president, however you want to refer to him. And then move it out into the private sector while we get our house in order.

I wonder if you would kind of comment on that and see if it makes any kind of sense in your research?

Mr. TYRE. It makes a great deal of sense to us. Our view on what we call instant privatization, which would be to privatize this thing very quickly, is that the new owners, the private sector owners, would face a very difficult risk-reward decision to make.

On the one hand, they could increase prices significantly, because the competition does not have a great deal of excess capacity today, and SWU must be used. So on the one hand, they might be tempted to increase prices as much as they possibly could; curtail future investments. And this frankly would result in very attractive cash flows to a private owner.

Of course, that would leave the business totally unviable in the future. We believe the nature of the business is such that it really requires some fixes and some investments today to get it to a position where it could very well be owned under private ownership in the future.

Senator FORD. Senator Domenici.

Senator DOMENICI. I only have a couple of questions with reference to how you did your study and who you did it for.

Because I do not understand, you spoke of doing this as you do for any commercial customer. Who was your client?

Mr. TYRE. The client was Martin Marietta Energy Systems.

Senator DOMENICI. The ones who currently run the enrichment facilities for DOE?

Mr. TYRE. That is correct.

Senator DOMENICI. So all the information was provided from them, and you are indicating to the committee that you are satisfied with the information that was given to you with reference to the operation of this, quote, enterprise, from which you arrived at your conclusion. Is that true?

Mr. TYRE. The information was either obtained from them, from DOE through them, or from DOE directly to us. There was some reason why the contract was put through Martin Marietta Energy Systems. They were our client, but we had free access to anybody that we chose to speak with, either in Martin Marietta or in the Department of Energy.

Mr. DIAMOND. Or in the marketplace. And we spoke to many people outside Martin Marietta Energy Systems and the DOE to get their views and opinions and to confirm the things that we were hearing from the inside.

Senator DOMENICI. I do not have any reason to conclude otherwise than that you have produced a very objective set of facts, other than to satisfy myself as to what your charge was.

What were you asked to do?

Mr. **Diamond**. Our charge was to recommend an appropriate going forward strategy for this enterprise, basically. And as we looked at that problem, a question we asked is, what is it you are trying to accomplish with this enterprise? Are you trying to generate funds for the Treasury? Are you trying to regain the market share you lost?

Are you trying to maintain a viable enrichment capability in the United States. And we were not satisfied that there was any clarity as to what those objectives were. So we set out a series of alternative strategies which could satisfy different of those objectives.

But at this point, we cannot recommend a particular one until it is clear what it is that the enterprise is really trying to accomplish.

Senator **Domenici**. Let me just make sure that I understand, and that you understand, and the record does, my question. I think Martin Marietta has done as good a job with this kind of mess as one could do.

It is a terrible enterprise to try to run, from what I can tell. But I want to make sure that none of your conclusions were supposed to be aimed at any way in preserving whatever interest Martin Marietta has in the enrichment business one way or another.

Is that a fair statement? That was not part of your analysis?

Mr. **Tyre**. That is correct.

Senator **Domenici**. They did not ask you to do something that would keep them in as managers or put them out or keep them longer or shorter? None of that was part of your analysis?

Mr. **Diamond**. No, sir, not at all. And they did not try to steer our results. And were free in answering questions. The testimony we have given and the report we have done is our own work and represents our own opinion.

Senator **Domenici**. I wonder then if I might, and again, as witnesses I can ask you these, but I do not want to put you to an undue amount of work as a client of someone, but I would like to propose 10 or 15 questions that relate to the two bills before us for your professional conclusion as it relates to your study.

Would you do that for you if I asked you?

Mr. **Diamond**. Yes, sir, to the best of our ability.

Senator **Domenici**. If one of your conclusions is, you want to do this, I ask you whether a particular provision in one bill is more apt to work than a parallel provision in the other bill, based on your analysis, would you give us the answer to that kind of a question?

Mr. **Diamond**. With the provision that we have not studied those particular bills.

Senator **Domenici**. Of course. I will submit them to you, and I will submit them carefully. There are six or eight of them, so we will have the benefit of your expertise.

Thank you very much, Mr. Chairman.

Senator **Ford**. Senator Johnston?

The **Chairman**. Should we be licensing URENCO to sell enrichment services to the United States?

Mr. **Tyre**. That is a difficult question. URENCO is a very attractive proposal to make to U.S. utilities. I think the answer has to do with the extent to which our objectives are to maintain a viable business within the United States and in some way responsible to

U.S. objectives; or the extent to which we are simply trying to reduce the overall cost of the uranium and the nuclear fuel cycle.

The CHAIRMAN. All right, how about this selling of the GCEP centrifuges to the private sector as proposed by the American Enrichment Corportation?

Mr. DIAMOND. Again, we did not study that in detail. I guess one issue that would occur to us is that in a market characterized by substantial overcapacity, the adding of additional capacity to the market cannot be something that would be attractive to the existing enterprise; but it may serve other purposes.

The CHAIRMAN. Which of these three strategies do you propose or advise?

Mr. DIAMOND. Our point is that it is impossible to tell which of these three strategies is superior until and when the enterprise and those who direct the enterprise decide what they are trying to get out of it, and what they want out of it is cash for the Treasury or a long-term viable business, or a large control over the world market for SWU's.

Our feeling is, you cannot have all of those things simultaneously. And each strategy will work, given that you are clear about what you are trying to accomplish.

The CHAIRMAN. What do you mean here when you say, out of business by 2006 for both maintain balance and growth increase share?

Mr. DIAMOND. I am not sure I understand the question.

The CHAIRMAN. Page 20. What does that mean, out of business by 2006?

Mr. DIAMOND. The strategy that exits us from the business is the one we are in now, and the so-called harvest strategy.

The harvest strategy is what we call a financially wiser way of doing what we are doing now.

The CHAIRMAN. That is if AVLIS fails to work?

Mr. DIAMOND. That is right.

The CHAIRMAN. I see. What percentage of confidence would you have that AVLIS will work?

Mr. DIAMOND. It would be difficult to——

The CHAIRMAN. I mean it will work scientifically. What you mean is work financially, in economics. Is that right?

Mr. TYRE. I think the answer to it is, for national security reasons and others, we had very limited access to the technology and the state of development and what not.

The point that we are making is that unless this business gets about finding a way to be competitive on the cost side, be it AVLIS or any other technology, it is going to be so noncompetitive that it will not succeed unless legislative barriers are put up, something artificial——

The CHAIRMAN. That is what you mean when you say it will not work, is being noncompetitive really?

Mr. TYRE. That is right, economically.

Mr. DIAMOND. Well, our understanding is that it is likely that AVLIS will work technically. From a businessman's point of view, however, it has got to come in at a reasonable cost, or it does not do any good.

The CHAIRMAN. Now, I notice you have one reference here to relief from TVA charges. Have you analyzed what would be an appropriate settlement for TVA?

Mr. DIAMOND. No, Senator, we have not. I am not sure I would be willing to speculate on it, either.

The CHAIRMAN. Thank you, Mr. Chairman.

Senator FORD. Your company did some work for Kentucky when I was Governor, and your work was very good and it is in another field, and I hope your work here is just as good as that.

We will give you an opportunity by some of the questions that will be asked by Members of this subcommittee. And I hope you will respond to those in a timely fashion.

And some of those may be legislative in nature, as Senator Domenici said he would give you what he expects legislation to do and what is the best answer to that and how it fits.

And as I understand you, we cannot have it all at one time. Did I get from your inference there that you cannot have all of these things at once, that it would almost have to be a phase in, and we would have to decide what the first step would be and what the second step would be?

Am I correct in that?

Mr. DIAMOND. In two areas, one, there are different kinds of strategies in which you can get different benefits, and we have got to choose.

And secondly, our belief is that going to instant privatization is not the wisest course right now, first, because you probably will not get full value, as you suggested earlier; and secondly, because given the nature of the business right now, a private owner might be tempted to harvest the business, to increase prices, and gain as much economic benefit in the short term as possible.

So in both cases, I think there are steps that have to be gone through.

Senator FORD. If you were in the financial world, i.e. one of the bond houses, what would your recommendation be to this procedure, what would a bonding house recommend to the Congress to do based on what we are thinking about here today?

Do you have any idea what they would suggest?

Mr. DIAMOND. It depends on their interest in it.

Mr. TYRE. With regard to privatization?

Senator FORD. Yes.

Mr. TYRE. I presume they would talk to the issue of whether the shares could be floated, and I guess the answer to that is, generally, you can float shares to anything.

Senator FORD. If the price is right?

Mr. TYRE. It is a matter of price.

Mr. DIAMOND. I think that is the key question in our view, having looked at it, is that at the present time there are enough risks in this business and enough problems in this business so that any buyer now would want a substantial discount from what you might feel was a fair value for that business.

And our suggestion is that there are some things that can be fixed over the next few years that might substantially reduce some of those risks, and therefore, increase its market value.

Senator **Ford**. Fine. Gentlemen, we thank you, and hope you will respond timely to these questions. And we may be seeing you again here.

Thank you very much.

The next witness will be Dr. Harold Seidman, if I have pronounced that right. And I think I have got Alan Dean right.

We are delighted to see both of you gentlemen here today. You have been very patient in listening to the other witnesses. So if you want to submit your statement for the record, it will be included in total. And if you want to highlight it, that would be fine.

STATEMENT OF DR. HAROLD SEIDMAN, GUEST SCHOLAR, BROOKINGS INSTITUTION, AND MEMBER, NATIONAL ACADEMY OF PUBLIC ADMINISTRATION

Dr. **Seidman**. Thank you, Mr. Chairman. I would request that it be submitted for the record, and I will try to the best of my ability to highlight, although the committee did ask that I do two things.

One was to talk about government corporations generally, as well as talk about this specific application of a corporation to the uranium enrichment activity.

So if you will bear with me, it will take a little bit to kind of explain some of the background about government corporations.

Senator **Ford**. We have until dinner, and if you go past that, we will eat and come back.

So go right ahead.

Dr. **Seidman**. So I will try to proceed as expeditiously as possible.

Senator **Ford**. Thank you very much, Dr. Seidman.

Dr. **Seidman**. The government corporation, as we now know it, evolved as a pragmatic response to the need to devise an institution capable of administering effective new types of government programs, first undertaken in World War I, and since greatly expanded.

To accomplish its wartime objectives, the government was confronted with the task of managing a number of commercial enterprises, including construction and operation of a merchant fleet, rental and sale of houses, purchase and sale of sugar and grain, and various lending and insurance programs.

These public enterprises had certain unique characteristics which clearly distinguished them from traditional government functions which do not involve a buyer-seller relationship.

One, the government was dealing with the public as an entrepreneur rather than as a sovereign.

Two, users rather than the general taxpayer were expected to pay the costs of goods and services.

And three, revenues and expenditures necessarily fluctuated with consumer demand, and flexibility was essential if such enterprises were to be able to respond to the dictates of the market.

Experience demonstrated that enterprises with such characteristics could not function effectively under administrative and financial control systems designed for totally different types of activity.

Enterprises could not be expected to operate as a business and respond to market forces if expenditures were limited to amounts provided by annual appropriations, and all revenues had to be turned over to the Treasury.

Governmental accounting and auditing systems had the limited purposes of preventing the over obligation of appropriated funds, and unlawful expenditures, and did not provide the information necessary to establish rates and prices; determine income and expense and profit and loss and evaluate result.

Governmental accounting, for example, does not normally include such costs as depreciation and interest on the government's investments. Accounts are maintained on a cash rather than on an accrual basis.

Furthermore, traditional government agencies were often hamstrung by a myriad of regulatory and prohibitory statutes in such areas as purchasing, sale of goods and property, and personnel.

Sporadic attempts by the controller general and the Congress to apply standard budget and audit controls made it difficult for enterprises to function efficiently without providing accountability.

When enacted, the Government Corporation Control Act of 1945, the Congress recognized both the need for a special type of government institution, tailored to the requirements of business programs, and for special types of controls over such institutions, which would assure accountability to the Congress and the president without impairing a central flexibility.

Congress expressly noted that the corporate form loses much of its peculiar value without reasonable autonomy in its day to day decisions and operations.

Under the provisions of the control act wholly owned government corporations are required to submit an annual business-type budget to the President and the Congress, and are subject to a commercial type audit by the controller general.

Congress is authorized to limit the use of corporate funds for any purpose, but it has rarely chosen to do so except for administrative expenses.

In reviewing business type budgets, the Congress is impelled to take into account both rate, revenues, and expenditures.

Senator Johnston did raise a question about the budget process, and I might elaborate on in response to the question which you raised earlier.

It is quite a different process. The Congress is not appropriating money. And in effect, it is approving the budget programs and approving the use of funds available to the corporation.

The business type budget is essentially a review of the program. Now it is true that the Government Corporation Control Act does authorize the Congress to limit the use of corporate funds for any purpose for which it so desires.

Or it can direct that dividends be paid, if, reviewing these financial statements, that sufficient has been earned that dividends ought to be paid.

It has not usually done so; in fact, very rarely. We have had some now over 40 years of experience with the Government Corporations Control Act. We asked at the time the National Academy did a study for the Office of Management and Budget in 1981, we asked the corporations to report to us if they had had any problems which resulted from the operations control act, and they all reported that they did not.

They reported they had problems resulting from controls that were imposed outside the Government Corporation Control Act by the Office of Management and Budget, but not by the provisions of the Government Corporation Control Act.

I have always cited it really as a qualitative rather than a quantitative review of corporate operations. And it does not interfere with the flexibility, but it has maintained the necessary accountability.

Now mixed ownership government corporations are exempted from the budget provisions of the control act. The control act also directed that any government corporation chartered under the laws of the District of Columbia, a state, or territory be liquidated, and that in the future no corporation be created or acquired for the purpose of acting as an agency or instrumentality of the United States except pursuant to an act of Congress specifically authorizing such action.

I noted that amendment 177 would have chartered a corporation under the laws of the District of Columbia, something which the provisions of the corporation control act intended to avoid.

For a number of reasons, there are difficulties that result when you charter a Federal instrumentality under the laws of a state or a territory. And it was for this reason that we had to liquidate the corporations that had been previously chartered under the laws of the District of Columbia, or under laws of a state, as some of the ones were in 1945.

The Government Corporation Control Act is not a general incorporation law. There is no comprehensive Federal law dealing with the powers, organizational structure, and legal status of government corporations.

Corporations possess only those powers which the Congress has seen fit to include in their enabling act. And in its 1981 report to the Office of Management and Budget on Government Corporations, the National Academy of Public Administration recommend that corporations generally be given the power to sue and be sued in their corporate name; retain and utilize revenues; to determine the character the necessity of expenditures, and the manner in which they are occurred, allowed and paid, subject only to laws specifically applicable to government corporations; and to enter into contracts and acquire and dispose of property.

Comparable provisions are normally to be found in corporation charters.

Corporations also may be given authority to borrow from the Treasury or Federal financing bank, and may be exempted from some or all of the civil service laws and regulations.

It should be emphasized that government corporations are organized to achieve a public purpose authorized by law. Incorporation does not cause an agency to lose its public character.

As the Supreme Court held in the case of *Cherry Cotton Mills* v. *US.*, quote, that the Congress chose to call it a corporation, referring to the Reconstruction Finance Corporation, does not alter its characteristics so as to make it something other than what it actually is, an agent selected by the government to accomplish purely governmental purposes.

The government corporation is nothing more than a different way of carrying out the public's business.

A wholly owned government corporation should not be confused with mixed ownership government corporations, and so-called government sponsored enterprisess, such the Synthetic Fuels Corporation, which are defined in law as not being agencies and instrumentalities of the United States.

Mixed ownership corporations, and government sponsored enterprise, because of their ambiguous legal status do continue to present serious problems of accountability.

Mixed ownership corporations tend to be private when it comes to distributing profits, but public when it comes to sharing losses.

The designation of government organized, financed, and controlled entities as nongovernment is misleading, and poses a number of unresolved ethical, legal and constitutional questions.

Indeed, examining amendment No. 177 clearly indicates some of these where it is described at one point as a government and private corporation, for which I know no precedent for using that terminology, which is an instrumentality of the United States with access to the Treasury and tax exemption.

On the other hand its employees are described as being not employees of the United States Government, which I find rather a contradiction. And if eventually it were to be privatized, you would in effect have private people owning a government entity, with all the privileges remaining.

And in terms of what has been discussed here today, the need for a one step or a two step approach, if the privatization is an objective. I think that clearly indicates the problem if you try to do both simultaneously. It will not work.

The **CHAIRMAN**. That is the mixed corporation will not work?

Dr. **SEIDMAN**. The mixed will not, and here, it raises all kinds of questions. Is it a part of the executive branch or is it not? What is the President's authority to make appointments? What is its responsibility to the Congress?

Does it have immunity from the conflict of interest laws? In fact, today, it still arises with the Federal National Mortgage Association which has retained some of its privileges as a government corporation, although it actually is wholly privately owned, where the equity ownership is private; the questions are still raised. They have just been raised in the last two weeks by competitors, saying, they still have the privileges which they have retained from their government status, and that is unfair competition.

They still have borrowing power from the Treasury. And here, under 177, they would have tax exemption. They would have borrowing power from the Treasury. It would have all the privileges, yet a kind of mixed ownership, although it is not classified even as a mixed ownership entity.

If it is to be private, you want to charter it as a private corporation; not to try to charter a government corporation under the laws of the District of Columbia.

Senator FORD. Doctor, I hate to interrupt you, but you said earlier you objected to the charter under the laws of the District of Columbia.

Dr. SEIDMAN. That is correct.

Senator FORD. That was also on 177.

Dr. SEIDMAN. That is right.

Senator FORD. And that further complicates the mix that you are talking about?

Dr. SEIDMAN. That is exactly right. The reason that the Government Corporation Control Act required that the state-chartered and district-chartered corporations be liquidated was because they thought it was anomalous to have a Federal instrumentality subject to state or district law.

Now this is a practical matter where it does come up. The Human Rights Commission of the District of Columbia would claim it has authority.

They will also charge them for issuing their annual report. And then there are provisions which I found in the District of Columbia, which I do not think you want applicable, which gives directors authority to remove other directors.

I do not think if it is to be a Federal instrumentality, which 177 is, that you want to subject it to the laws of the District of Columbia and the District of Columbia government.

That is the kind of situation you get into. And that is why I said Congress said very wisely we should not have any more of these, and sometimes Congress does not always observe what it has already done, and proceeded to go and charter some.

Senator FORD. That is the reason why we need people like you to keep us straight, Doctor.

Dr. SEIDMAN. At my age, it can be institutional memory, at least.

Senator FORD. Institutional memory is great.

Dr. SEIDMAN. The government corporation has been adopted throughout the world as the most effective form of organization for public enterprises.

President Truman prescribed the criteria for the use of government corporations in his 1948 budget message when he stated: Experience indicates that the corporate form of organization is peculiarly adapted to the administration of government programs which are predominantly of a commercial character; those which are revenue producing, or at least potentially self sustaining; and involve a large number of business type transactions with the public.

These criteria were reaffirmed by the first Hoover Commission, and remained valid today. There is no doubt that the Department of Energy's uranium enrichment program fully meets the prescribed criteria for the use of a government corporation.

Yet the program has been denied the operating and financial flexibility accorded Federal business enterprises organized as government corporations, and consequently, it has been seriously handicapped in maintaining the United States' competitive position in the world market.

Bringing the program under those systems of government financing, budgeting, accounting and auditing, designed for comparable government enterprises, would make possible substantial improvements in current performance, and at the same time provide for more effective accountability to the Congress.

The program is now compelled to maintain two systems of accounts, one for developing budgetary information for the Congress, and the other for developing business-type financial statements.

The program is financed by an annual appropriation, and revenues are paid into the Treasury. Arbitrary budgetary limitations deprive the program of the flexibility essential for making sound and realistic budget decisions.

Unless the program is restructured to provide appropriate operating and financial flexibility, it is doubtful that it will be able to maintain its present market position and demonstrate its future viability.

It is important that we look to the future; not to the past. If a corporation is created, the government's equity in which the corporation would be expected to earn a return would be determined by fair market value of the assets transferred to the corporation, not by the amounts previously appropriated for the uranium enrichment program.

To so burden the corporation with debt that it could not possibly recover its costs would be a disincentive to efficient management, and counterproductive.

Presumably the government has obtained the benefits of its past investments in the program. I add that, because this is often forgotten. As a government corporation, the owner of the corporation is the United States Government. If it maintained and presented a balance sheet as a corporation did, this would be listed as an asset.

And I find it rather curious that something like a person paying off their mortgage and then the banks owns your house. That is about what we are doing here.

Because the government will still take back the loan, but it will still own the corporation. And if the corporation appreciates in value, if it is successful, the government gets the benefit of it.

The other factor which has been ignored in this program is that it is very difficult to determine what should be allocated in costs to the commercial use of the program. Normally, where you have multi-purpose programs, such as the Tennessee Valley Authority, the costs of the investment in the program are allocated among the various purposes to be served. The power program does not pay the total cost of the investment in TVA. Part of it is allegated to navigation. A lot of it to flood control. A lot of it to recreation.

A substantial part of the investment here certainly was originally, and continues to be, for national defense. And that needs to be taken into account in any attempt to determine what the investment is and return, certainly for rate making purposes.

And that is really what I am talking about, is, what is the rate base? That is really what the debt problem is. We are talking about how much return. We are not really arguing about debt. We are talking about how much return the government ought to be getting from this activity.

And so as I have said, I have been rather baffled by some of the discussion which has gone on in the past in long debates about this issue, particulary when it comes up that the debt is up in the billions of dollars area. It is rather puzzling.

In supporting amendment No. 176 to S. 1084, to restructure the uranium enrichment program as a wholly owned government corporation, we are not arguing for special treatment. On the contrary, we are arguing for equal treatment, equal to that granted to most other Federal business enterprises which are administered as government corporations.

Thank you, Mr. Chairman.

[The prepared statement of Dr. Seidman follows:]

STATEMENT OF

HAROLD SEIDMAN
NATIONAL ACADEMY OF PUBLIC ADMINISTRATION

BEFORE THE SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT, SENATE COMMITTEE ON ENERGY AND DEVELOPMENT
ON

ORGANIZATION OF URANIUM ENRICHMENT PROGRAM

May 4, 1987

Mr. Chairman and Members of the Committee:

My name is Harold Seidman. I am currently a guest scholar at the Brookings Institution and a member of the National Academy of Public Administration. As government corporation specialist and later Assistant Director for Management and Organization of the Bureau of the Budget, I was responsible for implementing the Government Corporation Control Act of 1945 and advising the President and the Budget Director on the organization, management and financing of government corporations. I have also been a consultant to the United Nations, Economic Commission for Africa, and governments in Europe, Asia, Africa and South America on public enterprise organization and management. I am accompanied by Mr. Alan Dean, Chairman of the National Academy of Public Administration's Standing Panel on Executive Organization and Management and former vice president of the U.S. Railway Association and Assistant Secretary for Administration of the Department of Transportation. Mr. Dean is director of the Academy's seminar on Roles and Management of Government Enterprises.

The National Academy of Public Administration is a nonpartisan organization formed in 1967 to advance the effectiveness of public management through advice and counsel to all levels of government. In 1984 the Academy was chartered by Act of Congress, the first such charter granted by Congress since the charter for the National Academy of Sciences in 1865.

In am pleased to accept your committee's invitation to discuss generally the concept of the government corporation and specifically the proposal to restructure the Department of Energy's uranium enrichment program as a government corporation.

The government corporation as we now know it evolved as a pragmatic response to the need to devise an institution capable of administering effectively new types of government programs first undertaken in World War I and since greatly expanded. To accomplish its wartime objectives, the government was confronted with the task of managing a number of commercial enterprises including construction and operation of a merchant fleet, rental and sale of houses, purchase and sale of sugar and grain, and various lending and insurance programs. These public enterprises had certain unique characteristics which clearly distinguished them from traditional government functions which do not involve a buyer-seller relationship: (1) the government was dealing with the public as an entrepreneur rather than as a sovereign; (2) users, rather than the general taxpayer, were expected to pay the costs of goods and services; and (3) expenditures and revenues necessarily fluctuated with consumer demand and flexibility was essential if such enterprises were to be able to respond to the dictates of the market.

Experience demonstrated that enterprises with such characteristics could not function effectively under administrative and financial control systems designed for totally different types of activities. Enterprises could not be expected to operate as a business and respond to market forces, if expenditures were limited to amounts provided by annual appropriations and all revenues had to be turned over to the Treasury. Governmental accounting and auditing systems had the limited purposes of preventing the over-obligation of appropriated funds and unlawful expenditures, and did not provide the information necessary to establish rates and prices, determine income and expense and profit and loss, and evaluate results. Governmental accounting, for example, does not normally include such costs as depreciation and interest on the government's investment and accounts are maintained on a cash rather than an accrual basis. Furthermore, traditional government agencies were often hamstrung by a myriad of regulatory and prohibitory statutes in such areas as purchasing, sale of goods and property, and personnel.

Sporadic attempts by the Comptroller General and the Congress to apply standard budget and audit controls made it difficult for enterprises to function efficiently without providing accountability. When it enacted the Government Corporation Control Act of 1945 (31 U.S.C. 9101 et seq.), the Congress recognized both the need for a special type of government institution tailored to the requirements of business programs and for special types of controls over such institutions which would assure accountability to the Congress and the President without impairing essential flexibility. The Congress expressly noted that "the corporate form loses much of its peculiar value without reasonable autonomy in its day-to-day decisions and operations."

Under the provisions of the Control Act wholly owned government corporations are required to submit an annual "business type" budget to the President and the Congress and are subject to a "commercial type" audit by the Comptroller General. Congress is authorized to limit the use of corporate funds for any purpose, but it has rarely chosen to do so, except for administrative expenses. In reviewing business type budgets, the Congress is compelled to take into account both revenues and expenditures. Mixed-ownership government corporations are exempted from the budget provisions of the Control Act.

The Control Act also directed that any government corporation chartered under the laws of the District of Columbia, a state or territory be liquidated and that in the future no corporation be created or acquired for the purpose of acting as an agency and instrumentality of the United States, except pursuant to an act of Congress specifically authorizing such action.

The Government Corporation Control Act is not a general incorporation law. There is no comprehensive federal law dealing with the powers, organizational structure, and legal status of government corporations. Corporations possess only those powers which the Congress has seen fit to include in their enabling acts. In its 1981 report to the Office of Management and Budget on "Government Corporations," the National Academy of Public Administration recommended that corporations generally be given the power to sue and be sued in their corporate name; to retain and utilize revenues; to determine the character and necessity of expenditures and manner in which incurred, allowed and paid, subject only to laws specifically applicable to government corporations; and to enter into contracts and acquire and dispose of property. Comparable provisions are normally to be found in corporation charters. Corporations also may be given authority to borrow from the Treasury or Federal Financing Bank and may be exempted from some or all of the civil service laws and regulations.

It should be emphasized that government corporations are organized to achieve a public purpose authorized by law. Incorporation does not cause an agency to lose its public character. As the Supreme Court held in the case of Cherry Cotton Mills vs. U.S. (327 U.S. 536 [1945]), "that the Congress chose to call it a corporation (Reconstruction Finance Corporation) does not alter its characteristics so as to make it something other than what it actually is, an agency selected by the government to accomplish purely governmental purposes." The government corporation is nothing more than a different way of carrying on the public's business.

The wholly owned government corporation should not be confused with mixed-ownership government corporations and so-called government sponsored enterprises such as the Synthetic Fuels Corporation which are defined in law as not being agencies and instrumentalities of the United States. Mixed ownership corporations and government sponsored enterprises because of their ambiguous legal status do continue to present serious problems of accountability. Mixed ownership corporations tend to be private when it comes to distributing profits but public when it comes to sharing losses. The designation of government organized, financed, and controlled entities as "non-government" is misleading and poses a number of unresolved ethical, legal and constitutional questions.

The government corporation has been adopted throughout the world as the most effective form of organization for public enterprises. President Truman prescribed the criteria for the use of government corporations in his 1948 budget message when he stated:

> "Experience indicates that the corporate form of organization is peculiarly adapted to the administration of government programs which are predominately of a commercial character - those which are revenue producing, are at least potentially self-sustaining, and involve a large number of business-type transactions with the public."

These criteria were reaffirmed by the first Hoover Commission and remain valid today.

There is no doubt that the Department of Energy's Uranium enrichment program fully meets the prescribed criteria for use of a government corporation. Yet the program has been denied the operating and financial flexibility accorded federal business enterprises organized as government corporations and consequently has been seriously handicapped in maintaining the United States competitive position in the world markets. Bringing the program under those systems of government financing, budgeting, accounting and auditing designed for comparable government enterprises would make possible substantial improvements in current performance and at the same time provide for more effective accountability to the Congress.

The program is now compelled to maintain two systems of accounts - one for developing budgetary information for the Congress and the other for developing business type financial statements. The program is financed by an annual appropriation and revenues are paid into the Treasury. Arbitrary budgetary limitations deprive the program of the flexibility essential for making sound and realistic business decisions. Unless the program is restructured to provide appropriate operating and financial flexibility, it is doubtful that it will be able to maintain its present market position and demonstrate its future viability.

It is important that we look to the future, not to the past. If a corporation is created, the government's equity, on which the corporation would be expected to earn a return, should be determined by fair market value of the assets transferred to the corporation, not by the amounts previously appropriated for the uranium enrichment program. To so burden the corporation with debt that it could not possibly recover its costs would be a disincentive to efficient management and counterproductive. Presumably the government has obtained the benefits of its past investments in the program.

In supporting legislation to restructure the uranium enrichment program as a wholly owned government corporation, we are not arguing for special treatment. On the contrary we are arguing for equal treatment - equal to that granted most other federal business enterprises which are administered as government corporations.

Seidman-MM/TTT
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Senator **Ford**. Thank you, Doctor.

Mr. Dean, would you care to make any comments?

STATEMENT OF ALAN DEAN, CHAIRMAN, PANEL ON EXECUTIVE ORGANIZATION AND MANAGEMENT, NATIONAL ACADEMY OF PUBLIC ADMINISTRATION

Mr. **Dean**. I have only one or two supplemental comments, Mr. Chairman.

First, I would like to stress that proceeding with a wholly owned government corporation, as Dr. Seidman and I recommended, in no way stands in the way of the eventual privatization of this program, should the Congress and the Administration, in their wisdom, decide at a later date, that it would be feasible.

In fact, we strongly suggest that if this government owned corporation can prove through its actual operation its potential viability then it becomes possible to make the decision.

And it was earlier testified, do it with a return to the government which would be fair.

I spent five years as a vice president of the United States Railway Association which had the task of organizing Conrail. Let me say to this committee that if we had tried to sell Conrail at the time we organized it.

No one felt the common stock was of any particular value. It required several years of demonstrated operation of Conrail on a profitable basis as a Federally owned corporation before it became feasible to go to the investors in the United States and achieve a reasonble price for it as an operating railroad.

We think the same course is open to the Congress in this case.

Senator **Ford**. I think you have answered most of the questions I had on my mind.

Senator Domenici earlier made a comment that his 177, I believe, was structured based on Conrail and Comsat. It makes the comparison between his proposal and the Conrail and Comsat provisions.

We believe that you are familiar with the structure of these organizations which you have just alluded to. And how do the structures of the proposals compare with what we are trying to do here to Conrail or Comsat or TVA?

Dr. **Seidman**. Well, Comsat is something entirely different. Comsat initially was a wholly privately owned corporation.

It is true that the provision for the selection of incorporators and corporations under District law was followed for Comsat. But once the stock was sold, which was done very quickly, the people in the public who held the common stock elected the directors.

And except for the appointment of three directors of Comsat by the president, the Federal Government is not an owner. It is a regulated public utility. Which is not contemplated in this case.

It does not have special privileges of access to the Treasury. It is not tax exempt. And so I do not think Comsat is an example.

It is often confused because of the appointment of directors. I must say, I was responsible for having three instead of one. Because I said, three, clearly they do not represent the president.

The Attorney General has held that the government appointed directors of Comsat, their fiduciary responsibility is the corporation. The president is merely an appointing officer, to appoint three neutral directors. They do not represent the government.

Conrail was another thing. We took over a bankrupt organization. And I think Mr. Dean will talk to that. We took over a bankrupt railroad. That was a private railroad.

Mr. **Dean**. We actually took over six bankrupt railroads.

Senator **Ford**. Yes, and made them one.

Mr. **Dean**. And reorganized them into a railroad. Where there is a point of commonality is that Conrail, to succeed, had to be given a great deal of administrative business type flexibility.

And to that degree, we think we have an analogy with uranium enrichment.

However, as Dr. Seidman pointed out, each law setting up a corporation has to be designed to meet the needs of that corporation. We organized Conrail to be a railroad.

We need to design the uranium enrichment corporation to be effective in that business.

Therefore, I would not simply take over the Conrail format for this case. The flexibility to function in a businesslike way, we do need to have.

Senator **Ford**. Let me ask you, in the amendment that Senator Johnston and I introduced, we require that the entity have an NRC license at the end of ten years, five years for the regulations, and five years to secure and receive the license.

Would this be a good timeframe for the second phase, if everything has worked up to that?

Dr. **Seidman**. I think that is correct. The NRC is not prepared now, and that I think does create one of the problems, because if you privatize now, the NRC is in no position to promulgate regulations.

And certainly if we had a private company in the uranium enrichment business, we would not want one functioning independent of regulation by the NRC.

And I think the timeframe is a reasonble one for NRC to be able to develop the regulations. They have not done so now, and I do not think anyone says they are capable of doing so in the near future.

Senator **Ford**. Under our proposal, the Congress may require the repayment of capital or the payment of dividends to the Treasury from the new corporation, which we refer to as USEC.

Congress also is authorized to make appropriations, but not required to do so.

Can you comment on the structure, particularly where you feel that this will continue to subject the USEC to the uncertainties inherent in the annual budget and appropriation process?

Dr. **Seidman**. Well, I am always hesitant to say anything is a cure all. But the basic procedure should not create that kind of a problem.

I think the provision in there for the authorization of appropriations is standard language, just to cover the potential eventiality if it might occur. This is not an appropriated process. What your amendment provides is basically what the Government Corporations Control Act provides. As I said before, this has not in anyway interfered with the flexibility required to operate a government corporation or a business enterprise.

The funds are not appropriated funds. They are corporate funds. They are utilizing their revenues, or they have authority to borrow, which normally a corporation would require to meet cash flow problems or other problems of that type in terms of capital investment.

The only limitation that the Congress has normally placed on a corporation has been on administrative expenses, and that creates no problems.

That is all that is normally—usually what you will find in an appropriation act on a corporation is a very short statement saying, the following corporation is authorized to make expenditures of corporate funds in accordance with its approved budget program, provided, however, that the corporation shall not spend more than X dollars of the funds available to the corporation for administrative expenses.

And it usually is about two or three sentences is all you will find.

Now there have been problems that have occurred lately, but I think your bill provides for it. The difficulty are the ones under the Gramm-Rudman bill, and the frustration there which they see in the case of the Federal Deposit Insurance Corporation, telling them they cannot hire bank examiners.

Now bank examination is paid for by the banks. The corporations. No cost to the government. It is not out of the taxes. But under the presence circumstances, to tell the FDIC. But that is Gramm-Rudman, which because of the provisions, having that applicable to government outlay, I hope that that will not continue in creating a problem for a number of corporations.

But under the bill and amendment as you provide, have introduced, would be exempt from that condition.

But I see no reason why the corporation, in anyway, should be handicapped or not have the flexibility under your bill that you have introduced to meet its requirements.

And I know of no instance of a corporation which had adequate resources and revenues and borrowing authority, which ran into any problems with annual limitations.

The funds are available without fiscal—the funds come right back. And they are certainly sufficient revenue.

Senator **Ford**. Mr. Dean, did you want to follow up?

Mr. **Dean**. I would simply say, experience has shown that when the corporation is really self sustaining, that is, it earns as much as it needs, under the provisions of the Government Corporations Control Act, that money becomes automatically available under the annual budget programs.

It is only when the corporation begins to undergo shortfalls, then naturally, when it comes back to the Congress and asks for specific appropriations, the Congress must then go through the normal appropriation process and ask all appropriate questions about why it needs that extra money.

Senator **Ford**. It is making its accounting to the Congress.

Dr. **Seidman**. A government corporation's budget is included in the budget on a net basis. And you will see for many of them, you will find a minus figure in the budget. In other words, the government gets more in revenue than it is providing in funds to operate the activity.

Senator **Ford**. Well, in this same amendment, we have the Administrator under the supervision of the Secretary of Energy. Do you think that is a good idea? And can you elaborate on any precedents that you know of for this type of organizational structure?

Dr. **Seidman**. I think this is very essential. We have very few government corporations that report directly to the president. The choice there is that either it reports directly to the president, under the supervision of the president. I cannot think the president would devote much time to this particular activity.

What happens, if you create something like the uranium enrichment program as an independent agency, it is likely to be supervised either by a budget examiner in the Office of Management and Budget, or someone on the White House staff. It seems preferable that they would have the supervision of a Cabinet officer who can not only represent the interests of the program in dealing with the Congress and dealing with the executive office, and who represents it before the Congress.

Furthermore, it is important in terms of policy direction, because in effect, the Secretary stands in the place where the president would if he were directly supervising the corporation, as in an agency.

There are many of these activities that are not self maintained. There are interrelationships with the Department of Defense, with other parts of the government. The EPA. Where I think it is important that you have somebody independent of the particular corporation, who is looking at this from the broader government perspective.

Now except for the Tennessee Valley Authority, the Export-Import Bank, I guess the Pennsylvania Avenue Development Corporation, and maybe one I have left out, I do not claim this is complete, but the vast majority of government corporations are under the supervision of a secretary.

And that is the normal procedure. When I was in my former position in the Budget Bureau, in charge of management and organization, we tried to keep down the number of independent agencies in the government reporting directly to the president. We did not think it was either in their interests or in the government's interest to just multiply the number of agencies floating around in the executive branch.

But I think it is important both in the interests of the program itself. I do not see the supervision by the secretary being in anyway a handicap to the program.

And indeed, it is in the interests of the program to have someone at that level speak for it.

Senator **Ford**. At the Cabinet level?

Dr. **Seidman**. Yes.

Senator **Ford**. I do not have any other questions. And it seems like my colleagues have faded.

And I appreciate you two gentlemen very, very much more than you know for your fine testimony today, and your hard work in this arena.

It may be that we will want to get back in touch with you and discuss where we are going as it relates to this particular item.

It is something that has to be done. It must be done. But it must be done properly. Otherwise, we would be best to just leave it alone and let it go on a path of its own.

Mr. **Ward**. Mr. Chairman, I might say that the National Academy of Public Administration, which we represent, has been given a Congressional charter that obligates us to be of any assistance to the Congress as it considers management oriented legislation.

We are eager to help at anytime. We agree that this is urgently needed legislation, and we are delighted to see these hearings being held.

Senator **Ford**. Fine. Your obligation is fulfilled freely, I am sure.

Thank you both very much.

This hearing is now recessed until May 8th at 9:30 a.m. in this room.

[Whereupon, at 4:10 p.m., the hearing was recessed, to reconvene Friday, May 8, 1987.]

RESTRUCTURING THE DEPARTMENT OF ENERGY'S URANIUM ENRICHMENT PROGRAM

FRIDAY, MAY 8, 1987

U.S. Senate,
Subcommittee on Energy Research and Development,
Committee on Energy and Natural Resources,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:35 a.m., in room SD-366, Dirksen Senate Office Building, Hon. Wendell H. Ford, presiding.

OPENING STATEMENT OF HON. WENDELL H. FORD, A U.S. SENATOR FROM THE STATE OF KENTUCKY

Senator **Ford**. Good morning, ladies and gentlemen. It is good to see all of you this morning. Thank God, it is Friday. [Laughter.]

I do not know why we are here on Friday, but that is the way the system is working right now.

I am very pleased to continue the Subcommittee hearings on the redirection of the Department of Energy's uranium enrichment program. At our hearing last Monday, and at our earlier hearings in March, we heard an overwhelming consensus on the need to restructure the uranium enrichment enterprise. We also heard an overwhelming consensus on the need for congressional action to ensure that there would be United States uranium enrichment capability for the future.

That is why this Senator and the Chairman of the Full Committee, Senator Johnston, introduced Amendment No. 176, and Senators Domenici, Wallop, Simpson, and Bingaman introduced Amendment No. 177. These important pieces of legislation, although somewhat different, are both aimed at the same goals: to operate the United States uranium enrichment program as a continuing commercial enterprise on a business-like and economic and efficient basis.

We are anxious to hear testimony today from the operators of the gaseous diffusion plants, Martin Marietta, with their many years in the business. I am sure that they have a great deal to say, and that we will find their views on restructuring very enlightening.

The enrichment customers, the Nation's utilities, will also provide us with some valuable testimony on their views on restructuring the enrichment enterprise. We would like to ensure that the utilities have a reliable and affordable domestic supply option of fuel for their reactors.

Since Senator Domenici's bill considers issuing stock in an enrichment corporation, we are looking forward to hearing from a New York stock specialist on how the markets would react to such a proposal.

Finally, we will be hearing from a representative of the American Enrichment Corporation. The AEC proposed to the Department of Energy that they use the moth-balled Gas Centrifuge Enrichment Plant in Portsmouth, Ohio, to develop and operate gas centrifuge enrichment technology in the United States. If this proposal is viable and if it were accepted, it would be the first private provision of enrichment services in the United States.

In my opinion, implementing the AEC proposal would require legislation.

We are anxious to hear from AEC how their proposal affects our goal of restructuring the Federal enrichment program as a viable business enterprise.

As I have said to our witnesses on Monday, please feel free to tell us what you think of the corporation idea. We want to know if it will work. Have we set it up correctly? Will it solve the many problems that the U.S. enrichment program faces?

We want to act and act soon. But in that action, we want to do it right.

We are looking forward to hearing the witnesses today and their views on this situation.

The first witness this morning is Mr. Clyde Hopkins, Senior Vice President, Martin Marietta Energy Systems, Inc., Oak Ridge, Tennessee.

Mr. Hopkins, if you will, come forward and identify your colleague. If you wish to submit your statement for the record, we will be glad to accept it in full and you can highlight it, but that final decision is up to you.

STATEMENT OF CLYDE C. HOPKINS, SENIOR VICE PRESIDENT, MARTIN MARIETTA ENERGY SYSTEMS, INC., ACCOMPANIED BY DR. JIM RUSHTON, DIRECTOR OF BUSINESS SERVICES, ENRICHMENT ENTERPRISE, MARTIN MARIETTA ENERGY SYSTEMS, INC.

Mr. **Hopkins**. Thank you, Senator Ford.

My colleague today is Dr. Jim Rushton who is Director of Business Services for our Enrichment Enterprise in Oak Ridge, Tennessee.

Senator Ford, may I say once again it is an extreme pleasure to get to see you. I had the occasion of meeting and talking with you a number of times when I was Manager of the Paducah Gaseous Diffusion Plant in the middle 1970s.

It is also a pleasure to appear before this Committee today to discuss the uranium enrichment activity. I have submitted already a written statement for the record that gives my background, so I will move right into the substance of my testimony.

As the Subcommittee recognizes, uranium enrichment is a highly competitive, worldwide business today which is increasingly controlled by conventional commercial practices. It is in this light that I would like to share my perceptions on two topics: First, the institutional problems of the enterprise as it is currently structured;

and second, the issues that must be addressed to select a specific restructuring approach.

The Martin Marietta Corporation believes that two institutional problems create a large fraction of the difficulties associated with the enrichment business. The first is the ambiguous legislative foundation on which the U.S. enrichment program is built. The second is the difficulty in matching government agency decision-making processes and administrative procedures to the needs of the competitive environment.

Perhaps the best way to understand the two fundamental problems is to recognize that, because of the Defense origins of uranium enrichment, there has been a lack of clear legislative direction for the mission objectives and goals of a commercially oriented program.

These have been established and frequently redefined over the years as individual Congresses and Administrations placed their current views in the legislative record. As a consequence, enrichment policy has understandably been used to advance constantly changing national objectives with relatively little consistent focus on business issues such as predictable commercial behavior, competitiveness, or the need for reinvestment.

Today the enrichment program is being asked to help reduce the national deficit, improve the foreign trade balance, and promote the administration's privatization initiatives. With the current legislative mandate, this is quite proper. However, we must accept the fact that DOE has lost its historical monopoly in uranium enrichment.

Customers can now choose whether they want to do business under constantly changing conditions. As a consequence, we no longer have the luxury of simultaneously pursuing all of our national goals while using noncommercial procedures and guaranteeing the financial viability of the business.

When the Atomic Energy Act was signed 30-plus years ago this situation was not and probably could not have been anticipated. We need to establish the uranium enrichment activity as a distinct business entity and treat it as an accountable competitive business. Only then should we look to it to make a significant contribution to broader national goals. Moreover, only then will it have the health to do so.

There are several structuring alternatives for addressing the fundamental institutional problems. From Martin Marietta Corporation's perspective, the selection of the right reorganizational proposal depends on how several issues are resolved.

In its written statement to this Committee on May 4, DOE listed six implementation issues that must be successfully resolved in any proposal. I would suggest that four additional issues are also important. These are:

First, selection of reorganization goals. Over the last 40 years the enrichment activity has served a broad range of national goals. In selecting a specific reorganization alternative, it is necessary to decide which of these national goals are primary and which are less important.

Second, assurance that the defense and energy security are maintained if enrichment activities are transferred to the private sector.

The private sector business has fiduciary responsibilities to its stockholders. These responsibilities may require actions that are not necessarily in the national interest. The consequences of these actions must be acceptable to the government.

Third, determination of the best way to serve the taxpayers' interests. Early sale at a high price would bring the greatest early return to the Treasury. However, early sale requires that risk to investors be limited to acceptable levels and opportunities be sufficiently unconstrained. Otherwise, the private sector will offer a very low price.

Fourth, assurance that a government corporation for enrichment can operate as a responsible commercial business. Financial and management principles established for a government corporation must be translated into practical legislation to ensure that the benefits of restructuring are actually achieved.

Although the proposed alternatives for restructuring differ, these differences should not prevent the Congress and the Administration from working cooperatively toward a business structure that will ensure the continuing vitality of a competitive enrichment capability in the United States.

The Martin Marietta Corporation believes that this should be the first priority, and the Congress and the Administration should work toward a workable restructuring plan with a sense of urgency.

I offer my appreciation to the Committee for the opportunity to share our views. We are very excited about your efforts to design a stronger and more accountable U.S. uranium enrichment enterprise, and firmly believe its successful survival is dependent upon these efforts.

Thank you, and I will now respond to any questions you may have of me.

[The prepared statement of Mr. Hopkins follows:]

Statement of

Clyde C. Hopkins
Senior Vice President
Martin Marietta Energy Systems, Inc.

Before the Subcommittee on Energy Research and Development
Senate Committee on Energy and Natural Resources

May 8, 1987

Mr. Chairman and Members of the Committee:

It is a pleasure to appear before you and the other members of the subcommittee to discuss the U.S. Uranium Enrichment Activity. I have felt particularly close to the enrichment enterprise ever since I became manager of the Paducah Gaseous Diffusion Plant in 1972. I have watched the enterprise evolve from a strictly defense-related activity to one which has added an important international commercial component. Today, I have responsibility within Martin Marietta Energy Systems for all production and technology activities at the three enrichment production plants. I am excited about the opportunities to restructure enrichment activities to produce a more competitive, and more accountable, U.S. enterprise.

Today, as this Committee recognizes, uranium enrichment is a highly competitive worldwide business which is increasingly controlled by conventional commercial practices. In this light, I would like to share my perceptions about the U.S. enrichment enterprise on two topics: (1) the institutional problems of the enrichment enterprise as it is currently structured, and (2) the issues that must be addressed to select a specific restructuring approach.

The Martin Marietta Corporation believes that two institutional problems create a large fraction of the much more publicized, and ever changing, enrichment difficulties. The first is the ambiguous legislative foundation on which the U.S. enrichment program is built. The second is the difficulty in matching Government agency decisionmaking processes and administrative procedures to the needs of a competitive environment.

These two problems lead to others: diffuse responsibility and accountability, limited commercial experience on the management team, cyclical policy direction, limited flexibility to adapt to the marketplace, a dominance of short-term worries over long-term strategic issues, the intentional exposure of trade "secrets" and business strategies to competitors as a matter of procedure, as well as the issues which are before this committee, i.e., unclear enrichment mission, objectives and goals, confusion over what the enrichment program owes the Treasury, and protracted legal or quasi-legal battles surrounding TVA demand payments and uranium miners' claims against DOE.

Perhaps the best way to understand the two fundamental problems is to recognize that, because of the defense origins of uranium enrichment, there has been a lack of clear legislative direction for the mission, objectives and goals of a commercially oriented enrichment program. These have been established and frequently redefined over the years as individual Congresses and Administrations placed their current views in the legislative record. As a consequence, enrichment policy has been used (quite understandably) to advance constantly changing national objectives with relatively little consistent focus on business issues such as predictable commercial behavior, competitiveness, or the need for reinvestment. Procedures and rules for conducting business defaulted to standard operating policies for noncommercial government programs.

Today, the enrichment program is being asked to help reduce the national deficit, improve the foreign trade balance and promote the Administration's privatization initiatives. With the current legislative mandate, this is quite proper. However, we must realize that DOE has lost its historical monopoly in uranium enrichment. Customers can now choose whether they want to do business under constantly changing, noncommercial rules. As a consequence, we no longer have the luxury of simultaneously: (1) pursuing all our national goals while using noncommercial procedures, and (2) guaranteeing the financial viability of the business. When the Atomic Energy Act was signed thirty years ago, this situation was not anticipated. We need to establish the uranium enrichment activity as a distinct business entity, and treat it as an accountable, competitive business. Only then, should we look to it to make a significant contribution to broader national goals. Moreover, only then will it have the health to do so.

There are several restructuring alternatives for addressing the fundamental institutional problems of the Uranium Enrichment Activity. From the Martin Marietta Corporation's perspective, the selection of the "right" reorganization proposal depends on how several issues are resolved. In its written statement to this committee on May 4th, DOE listed six implementation issues that must be successfully resolved in any proposal.

- The impact of the TVA power contract on the financial viability of the enrichment corporation,
- The feasibility of transferring customer contracts,
- The basis on which AVLIS development will be continued,
- The amount (and manner of treating) the unrecovered Government investment in the enrichment activity,
- The need and feasibility of Nuclear Regulatory Commission licensing, and
- The apportionment of decontamination and decommissioning costs between the Government and the enrichment corporation.

I would suggest that four additional issues are also important. These issues are:

- Selection of reorganization goals--Over the last forty years, the uranium enrichment activity has served a broad range of national goals. In selecting a specific reorganization alternative, it is necessary to decide which of these national goals are primary and which are less important.

- Assurance that defense and energy security are maintained, if uranium enrichment activities are transferred to the private sector--A private sector business has fiduciary responsibilities to its stockholders. These responsibilities may require actions that are not necessarily in the national interest. The consequences of these actions must be acceptable to the Government.

- Determination of the way in which the taxpayers' interests are best served--An early sale at a high price will bring the greatest early return to the Treasury. However, early sale requires that risks to investors be limited to acceptable levels and opportunities be sufficiently unconstrained. Otherwise, the private sector will offer a low price. Current risks include uncertainty about the timing and size of the AVLIS payoff, the nature of NRC licensing regulations, the magnitude of decontamination and decommissioning costs, the nature of anti-trust and pricing regulation, and the outcome of ongoing litigation over the extent of DOE's responsibility to maintain the viability of a domestic uranium mining industry.

- Assurance that a government corporation for enrichment can operate as a responsible, commercial business--The financial and management principles established for a government corporation must be translated into practical legislation to ensure that the benefits of restructuring are actually achieved.

Although the proposed alternatives for restructuring uranium enrichment activities differ substantially, these differences should not prevent the Congress and the Administration from working cooperatively toward a business structure that will ensure the continuing vitality of a competitive enrichment capability in the United States. The Martin Marietta Corporation believes that this should be the first priority, and the Congress and Administration should work toward a workable restructuring plan with a sense of urgency.

I would like to offer my appreciation to the Committee for the opportunity to share our views. We are excited by your efforts to design a stronger and more accountable U.S. uranium enrichment enterprise.

Senator FORD. Thank you very much, Mr. Hopkins.

I will have a series of questions and try not to lead you up a primrose path, but try to get you through the mine field.

Mr. HOPKINS. Okay.

Senator FORD. We have heard a lot about the problems facing the enrichment enterprise in its current form. We have heard a lot, and had a lot of suggestions, and I think there has been an honest effort in both 176 and 177 to arrive at an end result that would be favorable to all concerned, particularly to the future of the enrichment program in our country.

Does Martin Marietta favor a particular restructuring approach for the U.S. enrichment enterprise?

Mr. HOPKINS. Yes, Mr. Ford. We clearly support the formation of a government corporation as rapidly as possible. We believe that is the most viable way to get ultimately to privatization, but we think we must walk before we run and the government corporation is the only way to go, in our opinion.

Now we feel this way for a couple of reasons. First off, there are an awful lot of risks for the investors if we start toward privatization immediately. These risks, as you know, and you have heard several people giving testimony say, that the debt to the U.S. Treasury is of great concern; the TVA demand charge is of great concern; the licensing required for these facilities if they were to go private is of tremendous concern. The private investor must be concerned about the new process, AVLIS, Atomic Vapor Laser Isotope Separation, is going to do, whether it is going to meet all of its objectives, and how soon is it going to meet them.

And of course we are all concerned about the lawsuits, the South African embargo, decommissioning and decontamination. So we believe that for all of those problems, because we have all of these problems that we must deal with, we can deal with those much more effectively as a government corporation, deal with those over some number of years, get them resolved to the extent possible, and then begin to plan toward privatization.

The Martin Marietta Corporation does believe privatization ultimately is the right thing to do, but again I say we must walk before we run.

Senator FORD. Mr. Hopkins, for the fear that you might give me the wrong answer, let me go ahead and ask this question: Is the corporation proposed by Senator Johnston and myself likely to solve the Enterprise's current problems?

Mr. HOPKINS. I think it will go an awful long way towards solving the current problems. I think as we all realize, one of the biggest problems we have is this annual budget cycle business that we have to go through. It just makes it almost impossible for us to do a good job of planning.

We really cannot set up a good business plan and expect to adhere to that because we never know what the financial situation is going to be from year to year. We make decisions this year that are impacted next year by what the Congress and the budget does. We are always dealing in the short term. We are trying right now to figure out how to survive from year to year—financially, that is.

So we believe that this will go an awful long way toward solving many of the problems that we are dealing with.

Senator **Ford**. Mr. Hopkins, I am sure that your having been in Paducah and having managed that plant, and being close to employees and such, how would the formation of a government corporation for enrichment affect Martin Marietta's employees and the operation of the facilities that would be transferred to the corporation?

Mr. **Hopkins**. Of course, Mr. Ford, it would depend on how we structure the government corporation. There are several ways that this could be done, I believe. I have great confidence that we can handle it successfully. It seems to me that the Federal employees who would be responsible for this organization could possibly have the option of remaining Federal employees or going into the new structure, whichever would be most desirable.

As far as our 4000 to 5000 employees that are currently involved in the enrichment business, there is precedent I believe for making good transfers of those people and all of their benefits to another corporation. We have just gone through that, as you know, with Martin Marietta three years ago. We had all worked for Union Carbide for many, many years.

Martin Marietta came in, assumed our activities in Oak Ridge, and that went off without a hitch. The main thing they did to assure that things went off smoothly was that they assured all of us who had been working for a long time under certain benefit plans that we would continue to enjoy those. They did not improve them, but they did not decrease them.

I also feel, though, very, very firmly that this new corporation needs to take over and decide how it is going to handle the transfer of employees. One thing I am totally convinced of is that the new corporation would need the majority, the great majority of our 4000 to 5000 people to continue with this enterprise. I think with everybody working together, that transfer could be successfully worked out.

Senator **Ford**. Let me just go over one statement that you made that the Martin Marietta Corporation believes that the formation of the government corporation for enrichment today can be compatible with privatization in the future. Probably that is the transition period that you recommend.

Mr. **Hopkins**. Right.

Senator **Ford**. Given the complexity, I guess would be a word, of the Enrichment Enterprise and its currently poor financial outlook, your position then is that imminent privatization of the enterprise is not a realistic goal?

Mr. **Hopkins**. I do not think that is a realistic goal. There are too many problems that need to be resolved before we could get the business shaped up enough to sell it for what it is worth. It seems to me we have to solve our major problems and try to get the highest dollar for the taxpayer out of this business when we do sell it.

Senator **Ford**. Well, you alluded to it. How would the creation of a government corporation for enrichment affect AVLIS development?

Mr. **Hopkins**. Let me say, to begin with, that several employees of the Department of Energy and a number of employees from Martin Marietta Corporation have been going around the world, if you will, for the last two-and-a-half years saying to all of our customers that AVLIS is the savior we are going to have for the enrichment enterprise. It is indeed going to be brought along by the United States. It is going to be developed on a schedule that is compatible with our needs to meet the market.

We have committed ourselves to have a price for enrichment services down the way that is going to be better than anybody else's price in the world, and I admit right now that it gets a little bit embarrassing as we go off to our customers and try to explain why the AVLIS program is not being supported as much as we had said it would be several years ago.

Frankly, what we are saying to them is we have great optimism and great hope that this restructuring effort is going to put us in a position with AVLIS to have a stable R&D funding program from year to year that can indeed bring that technology along on the schedule that we need to have it brought along on.

I can also say right now that we are very pleased with the progress of the technology. We have in Martin Marietta about 35 people located at the Lawrence Livermore Laboratory working on this new technology. We have about 15 or 20 people in Oak Ridge working on it. We have high confidence that we can bring it along and bring it to fruition, demonstrated on a full-scale basis, in about the 1990 time frame. There is little doubt in my mind that it can be available for production in the middle 1990s, if needed.

We obviously have to continue to watch what SWUs coming out of the gaseous diffision plants are costing us, what the cost of electrical energy is to produce those SWUs, and bring the new technology on at the appropriate time to keep us the most competitive in the world market.

Senator FORD. Thank you, Mr. Hopkins. I apologize to our Committee Full Chairman. I should have recognized him for an opening statement.

Bennett, I regret that.

The CHAIRMAN. I did not have one. I am glad you did not. I could have thought of one.

Senator FORD. Well, I lucked out. [Laughter.]

But I do recognize you. Bennett has been here at all these hearings, seven or eight hours a day that he has been faithful to his job, and not many chairmen around would put in that kind of time. I just compliment him for his hard work and common-sense effort toward what we are trying to do here.

The CHAIRMAN. Thank you very much, Wendell.

Mr. Hopkins, we have had testimony here that we have got to decide whether we want to be either government or private, that a hybrid corporation takes on the worst aspects of both government and private.

What is your response to that?

Mr. HOPKINS. I think it clearly has to be a government corporation. I would hate to see us get involved with a quasi-government corporation and have two entities trying to run the business. That is a good part of our problem right now with the business. We have so many people trying to run it.

I think we clearly need to get an administrator who is a strong administrator, put him in charge of the business, and let him run it.

The **Chairman**. You think ultimately we ought to go to privatization?

Mr. **Hopkins**. Ultimately; yes, sir.

The **Chairman**. But that ought to be really private, and not a hybrid?

Mr. **Hopkins**. Yes. I do not think we ought to ever go toward a hybrid organization, in my judgment.

The **Chairman**. If we go to a government corporation, what should be the role of the contractor? Should it be—and I think there is no prohibition that we work as a contractor, or we could have all these people as our employees of the government contract; or we could have them as your employees. What is your view of that?

Mr. **Hopkins**. I really honestly believe we ought to leave that decision to the new government corporation. Let me say, my personal preference would be to have an operating contractor. We have been involved in this business as an operating contractor for some 44 or 45 years right now. We think that has worked very effectively. We think we have done a relatively good job of it.

On the other hand, I would not like to see the legislation come down actually requiring that we have to continue with an operating contractor. I believe we ought to give the government corporation the responsibility of making that decision.

The **Chairman**. It is a very basic decision as to whether people—how many, 45,000—would be your employees or government employees.

Mr. **Hopkins**. Right.

The **Chairman**. And while we could leave that decision to the operator or to the administrator, my guess is that that is such a basic decision that we would have to decide that legislatively.

Mr. **Hopkins**. I think it would be a lot easier to continue to go with an operating contractor.

The **Chairman**. Tell me why it would be easier.

Mr. **Hopkins**. Because you have so many benefits that people have been receiving for a lot of years, and to suddenly now merge into a new government corporation as government corporation employees you would start to bothering people's fringe benefits—I do not know which way; it could be up or down.

The **Chairman**. Well, how about things like Civil Service benefits, protections, and difficulties from the standpoint of the employer? Would you speak to that?

Mr. **Hopkins**. I think you would have a lot more trouble trying to merge us into the Civil Service program than you would by leaving us as a separate contractor. Frankly, some of the salaries at the top of the organization I think would be hard to fit into the Civil Service framework.

I think when you look at the total benefit package perhaps associated with the contractor organization as opposed to the Federal Government, there would be differences. I guess my opinion is—I know my opinion is that we would have a hard time merging those without getting all the employees very, very upset.

There is nothing that upsets an employee like starting to bother his fringe benefits.

The CHAIRMAN. You think the employees would prefer to stay the employees of a contractor as opposed to being Federal employees?

Mr. HOPKINS. No question about it.

The CHAIRMAN. No question about it?

Senator FORD. Well, pardon me, Mr. Chairman, but Amendment No. 176 allows those who are under Civil Service to remain under Civil Service, and we do not alter that. The other, under management are continued in the same direction. So I think we have tried to think this one through without creating——

The CHAIRMAN. But that does not require that they stay private, does it?

Senator FORD. No. It allows it.

The CHAIRMAN. But I am just—you know, with 45,000——

Mr. HOPKINS. Excuse me. It is 4,000 to 5,000.

The CHAIRMAN. Excuse me?

Mr. HOPKINS. Between 4,000 and 5,000.

The CHAIRMAN. 4,000 to 5,000? Right. With 4,000 to 5,000 employees, my guess is that if they want to stay private that is what they would do. I thought there might be some agitation one way or the other.

Mr. HOPKINS. I think it would also be easier, Mr. Johnston, if ultimately we do privatize then to move from one private organization into another, than moving from a Federal corporation into a private organization.

The CHAIRMAN. The American Enrichment Corporation wants to sell enrichment services in competition with the corporation. They want to take over Portsmouth and some of those things. What is your view of that?

Mr. HOPKINS. I will have to honestly say that I have not seen their proposal. I have never had the privilege of reading that proposal, so I do not know the content of it. I am not qualified, therefore, to comment on the content of that proposal.

I intuitively feel, however, that it would be better to give the government corporation the entire assets and let them make the right decision about what to do with those assets as it plans its business for the future.

The CHAIRMAN. How about the idea of competition with the government? Is that good, or bad?

Mr. HOPKINS. Obviously we have some concern about that, but it depends on how the organization is structured. If the AEC Enterprise indeed is paying its rightful share for those assets and is not put in a preferential position with respect to the government corporation in the assets that it receives, then I think it may be okay. But unless you have the knowledge of what their proposal is, it is hard to make an assessment of whether it is okay to be competitive or not.

The CHAIRMAN. By the way, have you analyzed the TVA demand charges? Do you have, or could you give us advice on what a fair resolution of that is, assuming that DOE cannot do that?

Mr. HOPKINS. If DOE cannot do it, it is going to be tough for anybody. The contracts are between DOE and the TVA. I am told now—and we are not involved in that, I might say, as a contractor.

The CHAIRMAN. But you do not have a view of that at this point?

Mr. HOPKINS. No, sir, we do not have a view of that at this point.

The CHAIRMAN. Is it a good idea to facilitate at this time URENCO?

Mr. HOPKINS. I would not think so.

The CHAIRMAN. Why not?

Mr. HOPKINS. Again, I think we need to—this is an important business for the United States, and I think this business can be restructured and run effectively and efficiently and do the job that it is intended to do for our domestic utilities. It can do the job of meeting some of the national requirements, of indeed helping with the balance of payments, and indeed helping to some degree with the U.S. Treasury debt payment.

It seems to me that it would not be appropriate at this stage to set up a competitor for that business until we get it on its feet. After we get it on its feet and have it, then it ought to survive on its own. But right now, it is too sick to put a competitor out there to compete with it.

The CHAIRMAN. One final question. Among the basic questions we have got to ask and answer is: What should our market strategy be? To hold on, maximize profit? To sort of keep the market share as it is and live? Or try to maximize long-term market share and minimize present profit? What in your view is the right strategy?

Mr. HOPKINS. I think this market through the year 2000 and beyond is going to be a very, very good market. There is going to be a lot of opportunity out there to develop this into a very, very fine business for the United States. I think we need to be looking to the long term rather than continuing to make the short-term decisions that we now make day after day.

Nothing would please me more than to be able to be pushing more SWUs through the gaseous diffusion plant at an incremental cost of about $45 a SWU today, sitting those on the ground and selling them in a couple, three years for $80 to $90. That would be the best investment we can make.

But under this annual budget cycle that we operate with, the revenue cycle, we cannot do that. We are just barely surviving today. Our capacities at the gaseous diffusion plants are way, way down and we are missing a grand opportunity to put lots of good production on the ground and have it available for sale in the future.

The CHAIRMAN. In effect you would urge us to adopt a Japanese strategy like the Ministry of Trade and Industry where they maximize long-term market share?

Mr. HOPKINS. Absolutely.

The CHAIRMAN. Thank you, Mr. Chairman.

Senator FORD. Thank you.

Senator Domenici.

STATEMENT OF HON. PETE V. DOMENICI, A U.S. SENATOR FROM THE STATE OF NEW MEXICO

Senator DOMENICI. Thank you very much, Mr. Chairman.

I too want to join you in thanking our Chairman for his genuine interest. This is a very difficult part of the uranium problem, along with two or three other issues, and I look forward to working with you and him in an effort to solve it.

[The prepared statement of Senator Domenici follows:]

OPENING STATEMENT - SENATOR PETE DOMENICI

MAY 8, 1987 ENRICHMENT ENTERPRISE HEARING

GOOD MORNING. I LOOK FORWARD TO THIS SECOND DAY OF HEARINGS ON THE RESTRUCTURING OF OUR NATION'S URANIUM ENRICHMENT ENTERPRISE. I THINK THAT THESE HEARINGS ARE VERY BENEFICIAL TO US IN TERMS OF CLARIFYING THE GOALS WE SEEK IN THE RESTRUCTURING EFFORT, AND IN IDENTIFYING THE BEST METHODS TO ACHIEVE THOSE GOALS.

I AM CONFIDENT THAT, WITH A PROPER PERSPECTIVE ON THE TASK AT HAND, THAT SENATOR FORD AND MYSELF, AS WELL AS OTHERS WHO ARE CONCERNED ABOUT THE FUTURE OF THE ENRICHMENT BUSINESS, CAN PUT TOGETHER A WORKABLE FRAMEWORK WITHIN WHICH THIS ENTERPRISE CAN SURVIVE AND PROSPER IN TODAY'S INTENSELY COMPETITIVE MARKET. I AM ANXIOUS TO TRANSLATE THE INSIGHT FROM THESE HEARINGS INTO A COMPREHENSIVE "CONSENSUS" PIECE OF LEGISLATION AS EARLY AS POSSIBLE.

SO WITH THAT IN MIND, LET'S PROCEED WITH THE WITNESSES.

Senator DOMENICI. Mr. Hopkins, let me ask you a couple of questions about where you think we are trying to go in this process of trying to make our enrichment business more competitive.

Without reference to any of the bills around, could you tell us what you think we ought to be striving for to get rid of what we now have that encumbers and hinders our efforts to be competitive and, on the other side of the ledger, what the entity ought to strive to be so that it can be competitive?

Mr. HOPKINS. Sure. First off, I think we need to make a basic decision about what our objectives really are in the long run. Are we going to stay in this business? If so, let us make that decision and begin to make the plans that we need to make to stay in it.

Senator DOMENICI. I missed that. I assumed that. I assume we are here because we all assume we want to make that decision.

Mr. HOPKINS. Right.

Senator DOMENICI. So presume that is our goal, and share your thoughts with reference to my question presuming that is the case, that that is what we want.

Mr. HOPKINS. The best thing that could happen to us would be to get off the annual budget cycle that we are into where we are prohibited from making good business plans. We need to set ourselves up with a set of good business plans that we can all consistently and energetically pursue with all of our customers around the world.

There is a good market out there, and unless we are able to financially structure the organization in a way that allows us to pursue that market, I think we can never, never be successful.

I think we also have to get the Congress out of making the annual decisions about our capital installations. I cite the centrifuge program as an example where we went for a tremendous project that was going to cost $7-or-so billion, $7.5 to $8 billion. We worried about the possibility of funding that on an incremental basis because of the difficulty of getting approvals to do that through the Congress. So we go for a big project, rather than building things on an incremental basis.

I think we will be facing the same kind of problem with AVLIS, as we bring AVLIS technology on at the time it needs to come on, if we are not able to build that facility on an incremental basis that meets our market needs, then I think we will miss the boat again.

We somehow have to get off of this treadmill of being able to make major decisions that impact us in the short run.

Senator DOMENICI. Well then the principal objective you have is to create a new entity, and to get it out from under Congress to the maximum extent possible?

Mr. HOPKINS. That is the principle. Then I think we need to address all these other problems that I mentioned earlier, the debt to the Treasury, the TVA demand charge, the NRC licensing problems, the decommissioning and decontamination problems, we have to address all of these and get them satisfactorily resolved before we can head toward the privatization that we ultimately think we must get to.

Senator DOMENICI. Well, do you envision that we have to do this as a business judgment in two stages?

Mr. HOPKINS. Yes, sir. Absolutely. I think we have to deal with those as a government corporation, and then ultimately once we have defined our business and once we have it on its feet, once we know what its objectives are, once we have all of our major problems solved, then we can say to the private sector, here is what we have to offer. I think it is only at that time will we get the highest return for the taxpayer.

Senator DOMENICI. Would you not think that if we can, that if we do it that way we ought to do that all at once so that we do not come back after we have set up the government corporation, then come back to Congress? Should it not be self-executing if certain things happen?

Mr. HOPKINS. Yes, sir. I would like to see any bill that we pass right now have the provision for privatization in it in the long run. I think that will provide the appropriate framework then for moving from the government corporation into the private sector.

Senator DOMENICI. And what is your concern then about going private sooner than that? You just do not think it will work?

Mr. HOPKINS. I just do not think we can solve all the problems that we have to solve associated with the risk of a private organization taking this business over, those that I just enumerated. I think it would be very, very difficult to get a private entity to take over this organization, the enrichment organization, with those problems of Treasury debt, TVA demand charge, and so on, and assume full responsibility for those.

I also question whether it is possible to set up the private entity right now and leave all of those problems with the government. I think we have just got a whole bag of problems we need to work on.

Senator DOMENICI. But, Mr. Hopkins, what if we could solve in the legislation the TVA demand charges, the alleged Treasury debt—and it was legislatively agreed upon, and there have been numbers between a low of $350 million to a high of, with interest, $6 billion—assume we resolved that one as prescribed by the distinguished Chairman at $364 million; I believe I have been saying that it is $350 million, but surely we would all settle for $364 million, I assume?

Mr. HOPKINS. I would be happy to sign up for that.

Senator DOMENICI. Well, assume we could solve those two big outside contingencies in the legislation. Frankly, I assume we are going to solve those in this legislation even if we go to a government corporation, then what else is difficult in this transition? Assume those two are solved. What else should we do?

Mr. HOPKINS. The licensing problem would be difficult, and I think the private sector taking this business over would really like to see the new technology—which is the salvation of the business in the long pull—the AVLIS technology, be brought far enough along in its development stage to know that it is going to meet its objectives and targets.

I think private industry would want to have good assurance of that. I think you would have to have some guarantees associated with that.

Decommissioning and decontamination, you have obviously got to get a resolution of who is going to pay for that in the long run.

Then you have to get a good working arrangement for the product that comes out of our Portsmouth plant for the defense enriched uranium required for the submarine program. You have got to get a good working arrangement there.

Whether all of these can be done in the time frame, I think we need to get on with making this a separate entity so it can function effectively is the reason I question going privatization right now.

Senator DOMENICI. So we should go to a government corporation of some type, clean up as much as we can in the legislation going in, and then let that evolve into a private entity from that starting point?

Mr. HOPKINS. Precisely.

Senator DOMENICI. How do you envision going from government corporation to private occurring?

Mr. HOPKINS. I presume we would have to have some additional legislation that would make all the provisions and provide all the agreements of going from government to private. I am not prepared to tell you what I think all that legislation would encompass, today, but I believe that is what it would require.

Senator DOMENICI. But you think within a reasonable period of time that entity, however structure the government entity, they would be able to make recommendations as to how we should——

Mr. HOPKINS. What should be done.

Senator DOMENICI [continuing]. What should be done next.

Mr. HOPKINS. To deal with all of these problems and provide the right framework for this transition to private industry.

Senator DOMENICI. And as far as the NRC licensing, it has only been alluded to.

Mr. HOPKINS. That is right.

Senator DOMENICI. The problem there is that they are currently not licensed by NRC because of their DOE status, and Congress historically reserving that to DOE regulatory schemes rather than the NRC?

Mr. HOPKINS. Yes, sir.

Senator DOMENICI. Is that a difficult issue, as you see it?

Mr. HOPKINS. I think it could be, depending on which section of the NRC licensing regulations that are assigned to the enrichment enterprise.

As I understand it, there is some consideration, there has been some talk about not considering the licensing of the enrichment plant under 10 CFR 50, but considering the licenses—which is intended or allocated for nuclear power plants—but I understand there is some discussion about the possibility of considering it under section 70, which addresses fabrication facilities and chemical facilities and the like.

It is my opinion that diffusion plants more nearly fit into that category than in the former category. If that were the case, it could be done a lot easier.

Senator DOMENICI. Can you envision in a corporate scheme that in all events the government could end up owning the assets, nonetheless? There are some who say we would support this proposal, but we need some link to the government. Can you envision that arrangement wherein the government might still retain ownership of the assets?

Mr. **Hopkins**. And still sell stock to the private?

Senator **Domenici**. Yes.

Mr. **Hopkins**. That could possibly happen, but my personal preference would be to let it go totally private at the appropriate time. I think, as I said earlier, when you have got more than one group of people trying to manage anything, it becomes much more cumbersome than if you have a clearly assigned responsibility and accountability for the function.

Senator **Domenici**. Thank you very much.

Thank you, Mr. Hopkins.

The **Chairman**. May I ask one question?

Senator **Ford**. Surely.

The **Chairman**. Should we provide now how you later privative, assuming we think down the road somewhere we ought to go fully privatized, should we lay out all the rules of the road for that right now? Or should we just go ahead and get this government corporation in being strong and viable, and later decide how to make the transition?

Mr. **Hopkins**. I think the latter. If you could make all the decisions now, it would be okay; but we have got such complex decisions to deal with, I do not think it is feasible to deal with those and get the appropriate resolutions of those going into the private sector before we move out on the government corporation.

I think the quicker we can move to the government corporation entity, the better off the whole enterprise is going to be in the long run, as well as in the short run. We must move in that direction as rapidly as possible, in my opinion.

The **Chairman**. Thank you, Mr. Chairman.

Senator **Domenici**. I just wanted to make one last observation.

Frankly, I see the difficulty, Mr. Hopkins, in that there is almost an inconsistency between what you perceive to be the most serious problem—Congressional budgeting and annual appropriating—and a government corporation working; because the schemes we are thinking of in terms of the government corporation leave the authorization and appropriating process and budgeting process in effect.

How do you see that working?

Mr. **Hopkins**. I would hope, though, that once we have clearly established this as a commercial business entity and have set up all the ground rules under which that entity is going to operate, that it would have a good bit more freedom in deciding what direction the corporation ought to take, and that the Congress would be a lot more receptive to the business plans and the operating plans because they could be presented much more clearly and much more effectively in the shorter and the long run than we are able to do now.

We just do not have the right kind of planning done to have the Congress fully accept what the business needs to do, I think. Once we pull it out and have it operate as a separate entity, I believe we could do a better job of selling the program to the Congress.

Senator **Domenici**. Thank you, Mr. Chairman.

Senator **Ford**. I hope I understand the legislation I have introduced on the basis it is a complicated formula, but it gets us completely out, but leaves that little possibility if government needs to get back they can. But it is only as a last resort, almost.

Mr. Hopkins. Right.

Senator Ford. So I did not think we wanted to cut the cord completely, but just have a thread there. So it is a complicated situation. All of us want to do the same thing.

Mr. Hopkins. Sure.

Senator Ford. We want to have a viable, ongoing, profitable surging enterprise, and we do not have it now. It is sick and we are going to have to put it to bed and nourish it for awhile and go from there.

Mr. Hopkins, you and your colleague, we are delighted to have you here today. There may be a possibility of other questions. If there is, we will submit those to you in writing and hope that you will respond in a timely manner.

Mr. Hopkins. Thank you, Senator Ford. Let me say, once again, we are excited about what you all are doing. We enthusiastically support it, and will help in every way possible.

Senator Ford. Well, Senator Domenici and I have always worked pretty hard together, and Senator Johnston, and I think we will come up with a piece of paper that hopefully you will like.

Mr. Hopkins. Thank you.

Senator Ford. The next witness this morning is Mr. Sol Burstein, Vice President, Wisconsin Electric Power Company, Milwaukee, Wisconsin. Mr. Burstein is here today on behalf of Edison Electric Institute and the American Nuclear Energy Council.

Mr. Burstein, if you will identify your colleague, we will proceed. You can highlight your statement and we will put it in the record, or however you wish to proceed.

STATEMENT OF SOL BURSTEIN, VICE CHAIRMAN, WISCONSIN ELECTRIC POWER CO., ON BEHALF OF THE EDISON ELECTRIC INSTITUTE AND THE AMERICAN NUCLEAR ENERGY COUNCIL, ACCOMPANIED BY LORING MILLS, VICE PRESIDENT FOR NUCLEAR ACTIVITIES, EDISON ELECTRIC INSTITUTE

Mr. Burstein. Thank you very much, Mr. Chairman. We are delighted to have this opportunity to appear before you. With me is Loring Mills, Vice President for Nuclear Activities at the Edison Electric Institute.

We are, as you recall, summarizing testimony that had been prepared and presented earlier by Mr. Fager. We would request that you include that full statement on behalf of the Edison Electric Institute and the American Nuclear Energy Council. We regret that he could not be here personally.

Senator Ford. It will be included in the record.

Mr. Burstein. You recall, sir, that statements covering the broad spectrum of uranium supply and enrichment issues were provided to this Subcommittee for the utility industry on March 9 and 13. I would like to supplement those earlier statements in the area of restructuring the Department of Energy's uranium enrichment enterprise, particularly as addressed in Amendments No. 176 and 177 to the recently introduced Bills S. 1084 and S. 1100.

As indicated in our presentations on March 13, and as I repeat here, the DOE uranium enrichment enterprise is simply not competitive in the world marketplace and action is required by Congress this year to permit it to regain its earlier standing as a dependable, low-cost producer. Otherwise, our domestic interest, domestic jobs will be lost, and the Nation's trade balance eroded further.

Time is indeed running out. 1987 is the year to resolve the uranium enrichment issues, and we certainly would compliment you and your colleagues for the initiatives you have indicated in this matter, and the recognition of the timeliness that is involved.

The uranium enrichment activities of DOE are providing thousands of domestic jobs in the enrichment plants and in the coal and nuclear utility industries that are called upon to supply the electricity loads used by the DOE diffusion plants. But as currently operated within the Federal structure, DOE's price is currently the highest in the world.

Today DOE is charging commercial customers $119 per SWU. A few days ago I received a notice that for the following year it might be down to $117. This is still a demonstration——

Senator FORD. It is on the right path, though. It's just not fast enough. [Laughter.]

Mr. BURSTEIN. Again, it shows the lack of DOE's competitiveness in the world marketplace where, as we all know, prices overseas are less than $100, or even $90 per SWU. In fact, because of DOE's lack of competitiveness, a number of domestic electric utilities are prepared to give DOE notice of termination of their enrichment contracts.

One of the major reasons for DOE's higher price is the so-called issue of unrecovered government costs. Obviously this item has to be resolved as part of a legislative solution to establish a competitive domestic enrichment entity.

Both Senate Bills 1084 and 1100 include an acceptable resolution of this unrecovered government cost issue. A revitalization of the U.S. enrichment capability can be accomplished by restructuring the existing program to one with a market-oriented approach typical of a private-sector enterprise.

A properly structured new entity can become a low-cost producer of enrichment services for the world market, recapture lost market positions, and increase the number of domestic jobs while also increasing exports. The existing enrichment facilities in Kentucky and Ohio have sufficient capacity to serve the marketplace for several decades with their seasoned, experienced, and competent work force, their relatively low-cost capital commitment, and the availability of existing electric supply.

Everything necessary to be an effective competitor is in place, but the overburdening control of the Federal structure and the complicating goals imposed on its operation have made the current DOE enrichment enterprise an unsatisfactory supplier.

From a national interest standpoint, it is important to have at least one domestic supplier that is predictably competitive on the world market. Predictability is very important because our nuclear plants will operate for several decades. Customers need to have confidence that the goals of their enrichment suppliers are directed to serve those customers in an efficient way, separate from conflicting political objectives.

A highly competitive private organization would be preferred. However, the most important consideration at this time is to recast the existing enterprise into a form that will permit it to compete effectively in the world market. The new entity must be provided sufficient freedom to apply competitive business practices and it must be separate from the Federal budget and annual appropriations process.

Amendment No. 176 to the Senate 1084 Bill and Amendment No. 177 to S. 1100 are thoughtful approaches toward the establishment of a competitive enrichment entity. We are continuing to review these amendments with considerable interest and, while there are significant differences between them, important complementing elements are provided in each. A combination of these elements from both amendments appears to be highly desirable.

Amendment No. 176 establishes a wholly owned government corporation. Such a government corporation that is separate from the DOE, guided with appropriate business experience and removed from the annual budget and appropriations process of the Federal structure, may be the appropriate first step in this restructuring.

Amendment No. 177 to S. 1100 establishes a mixed government-private corporation that would manage and operate the enrichment enterprise while the ownership of the facilities is retained by the Federal Government. Amendment No. 177 also anticipates the eventual privatization of the enterprise at a later date.

We offer the industry's full support to work with this Subcommittee to perfect restructuring for the enrichment enterprise to retain business and jobs within the United States. Getting the enrichment enterprise into a competitive business entity will encounter a substantial number of challenges that should be addressed in statutory language.

In our full statement, Mr. Chairman, we offer comments in respect to the more important issues—namely, the management control, the value of the enterprise, operating licenses, decommissioning considerations, enrichment services contracts, enrichment for defense programs, the contracts for electricity that apparently are not needed in the near-term, domestic uranium supply industry concerns, and advanced enrichment technology.

Electric utilities have an obligation to their customers to provide an adequate, reliable supply of electricity at reasonable costs. Uranium enrichment is a major cost component of the nuclear fuel supply and action is needed by Congress this year to restructure the DOE uranium enrichment enterprise into an entity that can and will be competitive in the international marketplace.

Electric utilities offer their full support and assistance in developing a comprehensive Federal policy that will resolve the domestic uranium supply and enrichment issues in a manner that will benefit both the country and the electric utility customers.

We would be pleased to respond to any questions that you and your colleagues may have, sir.

[The prepared statements of Mr. Burstein and Mr. Fager follow:]

ORAL PRESENTATION OF
SOL BURSTEIN
VICE CHAIRMAN
WISCONSIN ELECTRIC POWER COMPANY
ON BEHALF OF THE
EDISON ELECTRIC INSTITUTE
AND THE
AMERICAN NUCLEAR ENERGY COUNCIL
TO THE
SUBCOMMITTEE ON ENERGY RESEARCH & DEVELOPMENT
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE
ON
RESTRUCTURING OF THE DOE
URANIUM ENRICHMENT ENTERPRISE
MAY 8, 1987

MY NAME IS SOL BURSTEIN, VICE CHAIRMAN OF WISCONSIN ELECTRIC POWER COMPANY. WITH ME TODAY IS LORING MILLS, VICE PRESIDENT OF NUCLEAR ACTIVITIES AT EEI TO ASSIST IN ANSWERING YOUR QUESTIONS. I WILL PRESENT A SUMMARY OF MR. FAGER'S TESTIMONY AND ASK THAT HIS FULL STATEMENT BE INCLUDED IN THE RECORD OF THIS HEARING. HE ASKED ME TO EXTEND HIS APOLOGIES FOR NOT BEING ABLE TO BE HERE TODAY, BUT A PERSONAL SITUATION REQUIRED THAT HE NOT ATTEND. MY STATEMENT IS PROVIDED ON BEHALF OF THE EDISON ELECTRIC INSTITUTE AND THE AMERICAN NUCLEAR ENERGY COUNCIL, REPRESENTING THE CUSTOMERS OF THE DOE ENRICHMENT ENTERPRISE.

STATEMENTS COVERING THE BROAD SPECTRUM OF URANIUM SUPPLY AND ENRICHMENT ISSUES WERE PROVIDED TO THIS SUBCOMMITTEE FOR THE

UTILITY INDUSTRY ON MARCH 9 AND MARCH 13. TODAY, I WILL SUPPLEMENT THE EARLIER STATEMENTS IN THE AREA OF RESTRUCTURING THE DEPARTMENT OF ENERGY URANIUM ENRICHMENT ENTERPRISE, PARTICULARLY AS ADDRESSED IN AMENDMENTS 176 AND 177 TO THE RECENTLY INTRODUCED BILLS S. 1084 AND S. 1100. AS INDICATED ON MARCH 13, AND REPEATED HERE, THE DOE URANIUM ENRICHMENT ENTERPRISE IS NOT COMPETITIVE IN THE WORLD MARKET PLACE, AND ACTION IS NEEDED BY CONGRESS THIS YEAR TO PERMIT IT TO REGAIN ITS EARLIER STANDING AS A DEPENDABLE, LOW-COST PRODUCER. OTHERWISE, DOMESTIC JOBS WILL BE LOST, AND THE NATION'S TRADE BALANCE ERODED FURTHER. TIME IS RUNNING OUT--1987 IS THE YEAR TO RESOLVE THE URANIUM ENRICHMENT ISSUES.

URANIUM ENRICHMENT ACTIVITIES OF DOE ARE PROVIDING THOUSANDS OF DOMESTIC JOBS IN THE ENRICHMENT PLANTS, AND IN THE COAL AND ELECTRIC UTILITY INDUSTRIES THAT ARE CALLED UPON TO SUPPLY THE ELECTRICAL LOADS USED BY THE DOE DIFFUSION PLANTS. BUT AS CURRENTLY OPERATED WITHIN THE FEDERAL STRUCTURE, DOE'S COMPETITIVE PRICE IS CURRENTLY THE HIGHEST IN THE WORLD. TODAY, DOE IS CHARGING COMMERCIAL CUSTOMERS $119 PER SWU. THIS DEMONSTRATES GRAPHICALLY DOE'S LACK OF COMPETITIVENESS IN THE WORLD MARKET WHERE PRICES OVERSEAS ARE LESS THAN $100 PER SWU.

IN FACT, BECAUSE OF DOE'S LACK OF COMPETITIVENESS, A NUMBER OF DOMESTIC ELECTRIC UTILITIES ARE PREPARED TO GIVE DOE NOTICE OF TERMINATION ON THEIR ENRICHMENT CONTRACTS.

ONE OF THE MAJOR REASONS FOR DOE'S HIGHER PRICES IS THE ISSUE OF "UNRECOVERED GOVERNMENT COSTS." OBVIOUSLY THIS ITEM MUST BE RESOLVED AS PART OF A LEGISLATIVE SOLUTION TO ESTABLISH A COMPETITIVE DOMESTIC ENRICHMENT ENTITY. BOTH S. 1084 AND S. 1100 INCLUDE AN ACCEPTABLE RESOLUTION OF THE "UNRECOVERED GOVERNMENT COST" ISSUE.

PROGRAM REVITALIZATION

REVITALIZATION OF THE U.S. ENRICHMENT CAPABILITY CAN BE ACCOMPLISHED BY RESTRUCTURING THE EXISTING PROGRAM TO ONE WITH A MARKET-ORIENTED APPROACH TYPICAL OF A PRIVATE SECTOR ENTERPRISE.

A PROPERLY STRUCTURED NEW ENTITY CAN BECOME A LOW COST PRODUCER OF ENRICHMENT SERVICES FOR THE WORLD MARKET, RECAPTURE

LOST MARKET POSITIONS AND INCREASE THE NUMBER OF DOMESTIC JOBS WHILE INCREASING EXPORTS. THE EXISTING ENRICHMENT FACILITIES IN KENTUCKY AND OHIO HAVE SUFFICIENT CAPACITY TO SERVE THE MARKET FOR SEVERAL DECADES WITH THEIR SEASONED, EXPERIENCED AND COMPETENT WORK FORCE, THEIR RELATIVELY LOW-COST CAPITAL COMMITMENT, AND THE AVAILABILITY OF EXISTING ELECTRICITY SUPPLY. EVERYTHING NECESSARY TO BE AN EFFECTIVE COMPETITOR IS IN PLACE, BUT THE OVERBURDENING CONTROL OF THE FEDERAL STRUCTURE AND THE CONFLICTING GOALS IMPOSED ON ITS OPERATION HAVE MADE THE CURRENT DOE ENRICHMENT ENTERPRISE AN UNSATISFACTORY SUPPLIER.

ORGANIZATIONAL STRUCTURE

FROM A NATIONAL INTEREST STANDPOINT, IT IS IMPORTANT TO HAVE AT LEAST ONE DOMESTIC SUPPLIER THAT IS PREDICTIBLY COMPETITIVE ON THE WORLD MARKET. PREDICTABILITY IS VERY IMPORTANT BECAUSE OUR NUCLEAR PLANTS WILL OPERATE FOR SEVERAL DECADES. CUSTOMERS NEED TO HAVE CONFIDENCE THAT THE GOALS OF THEIR ENRICHMENT SUPPLIERS ARE DIRECTED TO SERVE CUSTOMERS IN AN EFFICIENT WAY, SEPARATE FROM CONFLICTING POLITICAL GOALS.

A HIGHLY COMPETITIVE PRIVATE ORGANIZATION WOULD BE PREFERRED. HOWEVER, THE MOST IMPORTANT CONSIDERATION AT THIS TIME IS TO RECAST THE EXISTING ENTERPRISE INTO A FORM THAT WILL PERMIT IT TO COMPETE EFFECTIVELY IN THE WORLD MARKET. THE NEW ENTITY MUST BE PROVIDED SUFFICIENT FREEDOM TO APPLY COMPETITIVE BUSINESS PRACTICES, AND IT MUST BE SEPARATE FROM THE FEDERAL BUDGET AND ANNUAL APPROPRIATIONS PROCESS.

AMENDMENT 176 TO S. 1084 AND AMENDMENT 177 TO S. 1100 ARE THOUGHTFUL APPROACHES TOWARD THE ESTABLISHMENT OF A COMPETITIVE ENRICHMENT ENTITY. WE ARE CONTINUING TO REVIEW THESE AMENDMENTS WITH CONSIDERABLE INTEREST, AND WHILE THERE ARE SIGNIFICANT DIFFERENCES BETWEEN THEM, IMPORTANT COMPLEMENTING ELEMENTS ARE PROVIDED IN EACH. A COMBINATION OF ELEMENTS FROM BOTH AMENDMENTS APPEARS TO BE DESIRABLE.

AMENDMENT 176 TO S. 1084 ESTABLISHES A WHOLLY OWNED GOVERNMENT CORPORATION. SUCH A GOVERNMENT CORPORATION THAT IS SEPARATE FROM THE DOE, GUIDED WITH APPROPRIATE BUSINESS EXPERIENCE AND REMOVED FROM THE ANNUAL BUDGET AND APPROPRIATION

PROCESS OF THE FEDERAL STRUCTURE, MAY BE THE APPROPRIATE FIRST STEP OF RESTRUCTURING.

AMENDMENT 177 TO S. 1100 ESTABLISHES A MIXED GOVERNMENT-PRIVATE CORPORATION THAT WOULD MANAGE AND OPERATE THE ENRICHMENT ENTERPRISE WHILE THE OWNERSHIP OF THE FACILITIES IS RETAINED BY THE FEDERAL GOVERNMENT. ALSO, AMENDMENT 177 ANTICIPATES THE EVENTUAL PRIVATIZATION OF THE ENTERPRISE AT A LATER DATE.

WE OFFER OUR FULL SUPPORT TO WORK WITH THIS SUBCOMMITTEE TO PERFECT RESTRUCTURING FOR THE ENRICHMENT ENTERPRISE TO RETAIN BUSINESS AND JOBS WITHIN THE UNITED STATES.

RESTRUCTURING ELEMENTS

GETTING THE ENRICHMENT ENTERPRISE INTO A COMPETITIVE BUSINESS ENTITY WILL ENCOUNTER A SUBSTANTIAL NUMBER OF CHALLENGES THAT SHOULD BE ADDRESSED IN STATUTORY LANGUAGE. IN OUR FULL STATEMENT, WE OFFER THOUGHTS ON THE FOLLOWING ITEMS:

1. MANAGEMENT CONTROL
2. ENTERPRISE VALUE
3. OPERATING LICENSE
4. DECOMMISSIONING
5. ENRICHMENT SERVICES CONTRACTS
6. ENRICHMENT FOR DEFENSE PROGRAMS
7. CONTRACTS FOR ELECTRICITY NOT NEEDED
8. DOMESTIC URANIUM SUPPLY INDUSTRY, AND
9. ADVANCED ENRICHMENT TECHNOLOGY

SUMMARY

ELECTRIC UTILITIES HAVE AN OBLIGATION TO THEIR CUSTOMERS TO PROVIDE AN ADEQUATE, RELIABLE SUPPLY OF ELECTRICITY AT A REASONABLE PRICE. URANIUM ENRICHMENT IS A MAJOR COST COMPONENT OF NUCLEAR FUEL SUPPLY, AND ACTION IS NEEDED BY CONGRESS THIS YEAR TO RESTRUCTURE THE DOE URANIUM ENRICHMENT ENTERPRISE INTO AN ENTITY THAT CAN AND WILL BE COMPETITIVE IN THE INTERNATIONAL MARKETPLACE. ELECTRIC UTILITIES OFFER THEIR FULL SUPPORT AND ASSISTANCE IN DEVELOPING A COMPREHENSIVE FEDERAL POLICY THAT WILL RESOLVE THE DOMESTIC URANIUM SUPPLY AND ENRICHMENT ISSUES IN A MANNER THAT WILL BENEFIT BOTH THE COUNTRY AND THE ELECTRIC UTILITY CUSTOMERS.

Statement of
Mr. John F. Fager
Senior Vice President, Engineering & Operations
MSU System Services, Inc.
on Behalf of the
Edison Electric Institute
and the
American Nuclear Energy Council
to the
Subcommittee on Energy Research & Development
Committee on Energy and Natural Resources
United States Senate
on
Restructuring of the DOE
Uranium Enrichment Enterprise
May 8, 1987

My name is John F. Fager. I am Senior Vice President, of MSU System Services, Inc., a subsidiary of Middle South Utilities, and Vice Chairman of the Edison Electric Institute Nuclear Power Executive Advisory Committee. My statement is provided on behalf of the Edison Electric Institute (EEI) and the American Nuclear Energy Council (ANEC). EEI is the national association of investor-owned electric companies. Its members serve approximately 73 percent of all ultimate electricity customers in the nation, and they include a majority of the domestic customers for uranium enrichment services. These utilities operate 96 nuclear plants and currently have 8 additional units under construction. ANEC represents over 100 organizations having an interest in nuclear energy, including investor, public and cooperatively-owned utilities, manufacturers, architect-engineers, uranium mining companies (both domestic and international) and various other firms engaged in the nuclear fuel cycle.

Statements covering the broad spectrum of uranium supply and enrichment issues were provided to this Subcommittee on behalf of the utility industry on March 9 and March 13. In those statements we indicated our willingness to work with this Subcommittee in developing comprehensive legislation to resolve all the issues in an equitable manner. Testimony is provided today to supplement the earlier statements in the area of restructuring the Department of Energy (DOE) uranium enrichment enterprise, particularly as addressed in Amendments 176 and 177 to the recently introduced bills S. 1084 and S. 1100. As indicated on March 13, and repeated here, the DOE uranium enrichment enterprise is not competitive in the world marketplace, and action is needed by Congress this year to permit it to regain its earlier standing as a dependable, low-cost competitor. Otherwise, domestic jobs will be lost, and the nation's trade balance will be eroded further. Time is running out--1987 is the year to resolve the uranium enrichment issues.

Uranium enrichment activities of DOE are providing thousands of domestic jobs in the enrichment plants, and in the coal and electric utility industries that are called upon to supply the electrical loads used by the DOE diffusion plants. But as currently operated within the Federal structure, DOE is not competitive.

Competitiveness In the World Economy

For all United States industries to participate effectively in the world economy, they must serve international markets on a competitive and reliable basis. This requires the availability of an economical supply of electricity. With this in mind, electric utilities support unrestricted access to an open and competitive marketplace for uranium enrichment services and other fuel cycle services and requirements. History has shown that open and competitive markets promote innovation, as well as the efficient allocation and utilization of resources.

Electric utilities have an obligation to provide an adequate, reliable supply of electricity to their customers at a reasonable price. To do so, they continually strive to effectively manage expenses, which are ultimately paid by their customers. This is especially so for fuel costs, which represent a significant portion of electric utility expenses. Uranium enrichment is an essential component of fuel supply for commercial nuclear energy plants, and having at least one competitive domestic uranium enrichment enterprise is desired by electric utilities. Low-cost domestic uranium enrichment provides assurance for reliability of supply, which leads to economic benefits to electricity customers through lower rates, enhancing the competitiveness of domestic industries.

DOE Uranium Enrichment Enterprise

The United States developed uranium enrichment technology in the 1940's and expanded its capability in the 1950's, 1960's and 1970's. Initially the enrichment facilities were used exclusively for defense purposes, then reassigned to serve both defense and civilian needs.

For many years the United States enrichment enterprise operated as a monopoly. Lack of competition allowed the United States to use the supply of enrichment services as a domestic and foreign policy tool, and to follow a capacity expansion program which was driven by that policy, as well as by optimistic growth forecasts for nuclear power and a premature commitment to investment in new technology, rather than to follow a plan driven by market forces.

Technologically, the Federal uranium enrichment program has been a success story. From its development within the Atomic Energy Commission, subsequent transfer to the Energy Research and Development Agency, to the current operation within the DOE, enrichment services have been provided continually, on a reliable and dependable basis. However, the program has encountered a rapidly changing market, and in the process, has slipped from its free-world monopoly position and has ended up as the high-cost world producer in a market with surplus capacity. These significant market changes have placed DOE in a non-competitive position.

The uranium enrichment enterprise has been a unique operation within the Federal Government in that it has been self supporting on a cash basis. It has received and continues to receive revenues from civilian customers equivalent to the full out-of-pocket costs for providing the civilian service. Few, if any, other Federal operations have such an enviable pay-as-you-go record.

However, the U.S. enrichment program faces very difficult challenges at this time. DOE has lost a large share of its market, is burdened with excess production capacity, and has insufficient revenues to finance advanced technology. Also, the assignment of the enrichment program below the Assistant Secretary level within a cabinet department that has numerous responsibilities, makes it difficult to respond rapidly to the demands of the marketplace when necessary. In addition, the limitations of the Federal pay scale make it difficult to provide the incentive-reward structure needed to retain the best available managers for the program. As a result, DOE's enrichment price is currently the highest in the world.

Restructuring is needed if the program is to survive. Under the current Federal arrangement with conflicting program goals, the enterprise will gradually atrophy, resulting in a loss of domestic jobs and a loss of export business.

Competitiveness of Enrichment Enterprise

Simply put, the enterprise is not competitive in the world marketplace. In 1974, DOE was charging commercial customers $36 per Separative Work Unit (SWU). By 1983, the price had risen to a range of approximately $140 to $150 per SWU, depending on contract terms. This is an increase of over 385 percent! In 1987, DOE is generally charging commercial customers $119 per SWU, depending on contract terms. Although this price shows the recent progress DOE has made in reducing costs, it also demonstrates graphically DOE's lack of competitiveness in the world market where prices for enrichment services obtained overseas are less than $100 per SWU.

In response to the non-competitive position of DOE's enrichment business, many electric utilities and DOE's foreign customers are presently developing alternative plans for obtaining enrichment services. In fact, because of DOE's lack of competitiveness, a number of domestic electric utilities were prepared to give DOE notice of cancellation on the April 1, 1986 notification date called for in accordance with the terms in the enrichment contracts. This notification date was subsequently delayed by DOE until October 1, 1986; then until April 1, 1987; and just recently until April 1, 1988. The electric utilities urge and support actions by Congress and DOE to provide a market-driven management and organizational structure. Failure to take such actions will prompt the electric utilities to act in a manner that is in the best interest of their customers by seeking lower cost enrichment services.

One of the major reasons for DOE's higher prices is the issue of "unrecovered Government costs." The Office of Management and Budget (OMB) and the General Accounting Office (GAO) claim that billions of dollars are owed to the U.S. Treasury by the DOE enrichment enterprise with such funds to come from commercial customers. Although their position is understandable due to the desire to balance the Federal budget, in fact, DOE is not indebted to the U.S. Treasury. Since 1969, when the commercial program was initiated, the revenues from civilian customers have exceeded $15 billion, a value approximately equal to the total Congressional appropriations which have been used to provide civilian services over the same period. A substantial investment in production facilities has been paid for by using a portion of the program revenues for capacity expansion but, no debt has been accumulated by the enterprise. Congress has required, through the annual budget process, that annual program outlays be about equal to the annual revenues. Obviously this item must be resolved as part of a legislative solution to establish a competitive domestic enrichment entity. Both S. 1084 and S. 1100 include an acceptable resolution of the "unrecovered Government cost" issue.

Program Revitalization

Revitalization of the U.S. enrichment capability is urgently needed now, to achieve an efficient, competitive operation that will retain domestic jobs at the enrichment plants and serve as a major export business. This can be accomplished by restructuring the existing program to one with a market oriented approach typical of a commercial enterprise, using innovative and entrepreneurial approaches that have been successful within our democratic society. Uranium enrichment is an internationally competitive business, and the U.S. program must become a fierce competitor. U.S. civilian nuclear energy programs are now, and will continue to be, the largest market in the world for these enrichment services. It is unthinkable to drive the U.S. enrichment capability out of existence while off-shore facilities gain a larger share of the existing market.

By restructuring the enrichment enterprise, it can become a low cost producer of enrichment services for the world market, recapture lost market positions and increase the number of domestic jobs while increasing exports. Operated as a stand-alone business entity, responsive to market conditions and requirements, the existing enrichment facilities in Kentucky and Ohio have sufficient capacity to serve a growing market for several decades with their seasoned, experienced and competent work force, their relatively low-cost capital commitment, and the availability of existing electricity supply. Everything necessary to be an effective competitor is in place, but the overburdening control of the Federal structure and the conflicting goals imposed on its operation have made the current DOE enrichment enterprise an unsatisfactory supplier. Restructuring the enterprise into a stand-alone organization can achieve the competitive goal.

Organizational Structure

From a national interest standpoint, it is important to have at least one domestic supplier that is predictibly competitive on the world market. Predictability is very important because our nuclear plants will operate for several decades. Customers need to have confidence that the goals of their enrichment suppliers are directed to serve customers in an efficient way, separate from conflicting political goals.

Restructuring the DOE enrichment enterprise into a highly competitive private sector business is preferred. However, the most important consideration at this time is to recast the existing enterprise into a form that will permit the entity to compete effectively in the world market. Conrail and Comsat are examples of successful organization structures upon which a restructured enrichment program might be based. The new entity must have sufficient freedom to apply competitive business practices, and it must be separate from the Federal Budget and annual appropriations process and constraints. Privatization appears to be attractive for this business at some point in the future.

Amendment 176 to S. 1084 and Amendment 177 to S. 1100 are thoughtful approaches toward the establishment of a competitive enrichment entity. Both amendments are offered in recognition that the present arrangement is unsatisfactory for the existing competitive market, and a substantial change is needed. We are continuing to review these amendments with considerable interest, and while there are significant differences between them, important complementing elements are provided in each. A combination of elements from both Amendments appears to be desirable.

Amendment 176 to S. 1084 establishes a wholly owned government corporation. Such a government corporation that is separate from DOE, guided with appropriate business experience and removed from the annual budget and appropriation processes of the Federal structure, may be an appropriate first step to revitalize the uranium enrichment enterprise.

Amendment 177 to S. 1100 establishes a mixed government-private corporation that would manage and operate the enrichment enterprise while the ownership of the facilities is retained by the Federal Government. Also, Amendment 177 anticipates the eventual privatization of the enterprise at a later date conditioned upon Congressional approval. This Amendment does appear to provide an entity that has the flexibility to achieve a competitive status. We offer our full support to assist this Subcommittee in the development of an appropriate structure for the uranium enrichment activities.

Restructuring Elements

Restructuring the enrichment enterprise into a competitive business entity will encounter a substantial number of challenges that should be addressed in statutory language. The following elements are significant items that must be considered:

1. Management Control of the Enrichment Enterprise - Operation of a successful competitive uranium enrichment enterprise requires management approaches that are typical of a private sector corporation with the necessary financial and operational flexibility to be responsive to the international marketplace. Restructuring of the domestic uranium enrichment enterprise should establish an entity that is removed from the constraints of the Federal Budget and the annual appropriation process.

2. Defining a Reasonable Value for the Enterprise - As presently operated, the assets have an indeterminate value because the enterprise is not competitive in the world market and is on the verge of losing its long-term enrichment supply contract base. Assigning the present book value as if it was the correct equity value of a new entity is inappropriate and there is no apparent need to establish a specific equity value for the entity at this time. The U.S. Treasury would receive greater value for the assets at some future date by selling securities to the public after a new entity has been established and a stable profitable business basis achieved.

3. Obtaining a License For Operation - Obtaining a typical NRC license for facilities that have been operating for several decades is inappropriate. Since the enrichment plants are

now and have for some time, been operating under DOE safety practices, the DOE safety practices should be continued as long as the new entity operates under the guidance of DOE or is owned by the Federal Government. At some future date, when the entity operates completely separate from DOE it may be appropriate to establish NRC responsibilities, but the approach should not be that used for nuclear power reactors. Enrichment operations are of a character similar to fuel fabrication and conversion facilities, now licensed by the NRC under 10 CFR Part 70, using safety criteria quite different than power reactor licenses. Using the Part 70 safety criteria for an operating license without the encumberance of a detailed design and construction permitting process is applicable.

4. Cost of Decommissioning - The Federal Government and the new entity should share the financial responsibility for the eventual decommissioning of the enrichment plants on a pro-rata basis of the quantity of enrichment that each produced at the plants. Since there are a number of peripheral facilities at each plant site with contaminated areas not related to the ongoing enrichment functions, the financial responsibility for other than the enrichment plant itself must be retained by the Federal Government and not be allocated as a burden on the new entity.

5. Existing Enrichment Services Contracts - Congress should designate that the existing enrichment contracts are to be honored in full by the new entity, and the freedom for competitive contracting with customers in the future should be provided.

6. Enrichment Services for Defense Programs - The new entity should be responsible for providing enrichment services for the Federal Government on a commercial basis comparable to that for civilian customers.

7. Contracts for Electricity Not Needed - Electricity supply contracts were initiated in 1967 between two Federal Government organizations, DOE's predecessor and TVA, and the resolution of this issue is a Federal responsibility that should be settled through negotiation among all parties with a limited burden assigned to a new competitive enrichment entity.

8. Domestic Uranium Supply Industry - If a substantial domestic uranium supply industry is to be assured for national security purposes, that should be the responsibility of the Federal Government and not the responsibility of a new competitive enrichment entity.

9. Responsibility for Development of Advanced Enrichment Technology - Continued development of low-cost advanced enrichment technology should be performed by both the DOE and the new entity. The current diffusion technology is outmoded and the development of advanced enrichment technology needs to be continued as a sound business practice of the new entity to assure that it remains competitive. At the same time, DOE has obligations to carry on basic energy research as a national goal, including advanced enrichment technology for both civilian and defense applications.

SUMMARY

Electric utilities have an obligation to their customers to provide an adequate, reliable supply of electricity at a reasonable price. Uranium enrichment is a major cost component of nuclear fuel supply, and action is needed by Congress this year to restructure the DOE uranium enrichment enterprise into an entity that can and will be competitive in the international marketplace. Electric utilities desire to have a comprehensive Federal policy that will resolve the domestic uranium supply and enrichment issues in a manner that will benefit both the country and the electric utility customers. In this regard, electric utilities support the following positions for the United States uranium enrichment enterprise:

1. A national policy needs to clearly define the strategic goals and functions of uranium enrichment services provided in the United States.
2. The present DOE uranium enrichment enterprise is not indebted to the U.S. Treasury. In fact, if all prior costs were properly assigned between commercial, defense, and nonproliferation/national security activities, it is probable that revenues from civilian customers have subsidized the non-commercial enrichment programs.

3. The DOE uranium enrichment enterprise should be restructured into an organizational arrangement that would allow the enterprise to operate like an independent private sector company.

4. The several challenges to the establishment of a competitive commercial enrichment enterprise are resolvable through statutory guidance for a new entity.

5. The new enrichment entity should continue to develop advanced enrichment technologies as long as there are realistic prospects for the new technology to ultimately lower the cost of enrichment services. This will provide the basis for the long-term competitiveness of the enterprise.

Electric utilities offer their full support and will be pleased to work with this Subcommittee to perfect the restructuring for a competitive uranium enrichment enterprise that will retain business and jobs within the United States of America.

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Senator **Ford**. Thank you, Mr. Burstein.

Previous testimony has indicated that on the order I think of approximately $10 billion in sales are at risk over a period of time if nothing is done to help the enrichment program. Furthermore, an executive from Duke Power has testified that his and other utilities would have no choice—no choice—but to cancel their contracts with DOE if prompt corrective action is not taken.

Of course as we heard in testimony here the other day, DOE has made certain agreements in order to keep some of these utilities' contracts on board because they have a 10-year life. If they cancel in between that, there is a charge.

Let me ask you this question: Does the restructuring in Amendment No. 176 provide the enterprise with sufficient authority and flexibility to retain this important market?

Mr. **Burstein**. As I indicated, Mr. Chairman, we are still looking at some of the details. But we think it goes a great way toward doing that. We think it forms the basic framework under which that can be accomplished.

Senator **Ford**. Now at the end of your statement you listed several things that were important. What specific provisions do you see as essential for giving the enterprise the flexibility and authority that it needs?

Mr. **Burstein**. I think obviously we have to define who is going to run the enterprise. There has to be a definition of the management control aspects that I addressed by those two words in my summary. Others have testified that we cannot have this kind of a divided interest that presently exists in many aspects of the management and planning for a $10 billion enterprise.

It requires a great deal of single-purpose, single-mindedness with a market-oriented emphasis. I think we have had in the past over the years a what might be called a "technology-oriented" thrust. We now have to compete in the world market. We have learned that what we can do, others can do, and we have to demonstrate that we can do it better.

I believe as a second point we have to be certain that we can operate under existing technological safety analyses. We cannot be uncertain as to where the licensing activities that might come from independent reviews by the Nuclear Regulatory Commission or others might lead us.

There are clearly needs to define how the contractual arrangements that exist now between utilities and DOE will be handled. The methods of transfer and who has responsibility for living up to those obligations has to be defined.

In summary, there are a number of issues that are out there. The one underlying factor that we need to remove in all of these cases is uncertainty. We must have some kind of way of getting rid of doubt, question, and lack of predictability.

I think what we are all looking for is a market-oriented predictable system that we can have confidence in.

Senator **Ford**. Well, that was my next question. So do you think the changes that are being recommended would create enough customer confidence to enable your utility and others to avoid cancelling their contract?

Mr. **Burstein**. If we had both the predictability and the competitive price levels, the answer is absolutely yes.

Senator **Ford**. Well, given the complexity of the enrichment enterprise and its currently poor financial outlook, is imminent privatization of the enterprise a realistic goal?

Mr. **Burstein**. I think it is possible, sir. But I must believe that there is no argument that there is going to be a timing difference. I think the government corporation could probably be adopted sooner than a total privatization structure. I think there are so many details that need to be included in the total privatization concept that it would take a longer period of time to accomplish.

I think that is our ultimate objective, in all cases, and we would certainly like to see that done today if it could be done. As a practical matter, it seems to me that because we are in trouble now and that time is running out, we have got to do what is most expedient as soon as we can, and work toward a date-specific which could be included in this legislation that says within 5 or 10 years we will have such a program in place, leaving it to that interim to iron out these many, many details that require clarification and definition.

Senator **Ford**. With privatization our ultimate goal—and we all I think want to get there—would not the taxpayer, which is the government, get more money for the business if it were restructured and the legislation passed to allow the enterprise to operate within that framework until it had a successful track record than to put it on the public market?

Mr. **Burstein**. One of the items that I did mention quickly was the matter of the enterprise value. Right now, I do not know how one would establish the value of this enterprise. It appears not to be a profit-making entity at this point in time. I am not sure how you would establish a value in the absence of a market opportunity and a structure that would permit some return to the potential investor.

So at this point in time, outside of merely adding up the present value of the physical assets, it seems to me that one of the things you cannot do is to establish the value of the enterprise with any accuracy.

Senator **Ford**. I had heard of the procedure. I had not understood it as well as the people with Booz, Allen & Hamilton who testified earlier this week about a procedure called "harvest."

If the enrichment enterprise is privatized, how can the government ensure that an enrichment capability is maintained in the United States, and that the enterprise is not simply harvested for maximum profits?

Mr. **Burstein**. Well, I think that is a risk, sir, but I might add that I see the enrichment enterprise no different than many other enterprises in the private sector upon which this government depends.

Much of our national defense and security is provided by private industry under various types of contracts and other arrangements with the Department of Defense. I am sure that that is a vital and viable relationship between American industrial capacity and the Federal security and defense needs.

I would certainly anticipate that the same kind of relationship can exist in other areas. I might add, however, that to do so it must remain a competitive, profit-making enterprise. It is not going to survive as a private organization unless it achieves that sort of status.

Senator **Ford**. Thank you, Mr. Burstein.

Senator Johnston.

The **Chairman**. Mr. Burstein, if you went to a private corporation it would increase the cost of capital, would it not?

Mr. **Burstein**. Pardon me, sir?

The **Chairman**. I say, if you went to a private corporation, if you privatized the business, would that not increase the cost of capital?

Mr. **Burstein**. Yes, sir.

The **Chairman**. Would the business be sufficiently profitable to be able to shoulder that burden?

Mr. **Burstein**. I am not sure it is at the present time, sir. It would have to become so in a very short time, but at present I am not certain with the burdens that are presently imposed on the enterprise, whether it can do so unless it enlarges its market.

The **Chairman**. Now do you agree with Mr. Hopkins that we should not try to detail in the legislation how we get from a government corporation to a private corporation? But rather to simply go the first step and leave that to later Congresses to determine how we bridge the gap at a later date?

Mr. **Burstein**. I agree that that is the most expedient method, sir. I think this Congress has the capability of forging the details in legislation that would lead to privatization. I just think, in all fairness, it would take longer and I think time is of the essence.

I think there are so many details to be worked out that the legislation that we feel is urgently required may be delayed to a point where we could continue to further erode the markplace.

The **Chairman**. So we ought to leave this relatively clean?

Mr. **Burstein**. Yes, sir.

The **Chairman**. Now a mixed corporation would also, you understand, be quite complicated.

Mr. **Burstein**. It certainly would.

The **Chairman**. When you set up the salary schedules, and the conflicts of interest schedules, and all those, it is very complicated. We found that out in the Synthetic Fuels Corporation which is not a model that we want to emulate here.

Thank you, Mr. Chairman.

Senator **Ford**. Thank you.

Senator Domenici.

Senator **Domenici**. Mr. Chairman, let me just say to Mr. Burstein, as you review the two pieces of legislation and make your further recommendations, I hope you will give us further advice.

I find on page 9 of your statement the most succinct analysis of what we ought to try to do. You say that it might be an appropriate first step—the wholly owned government corporation—provided that such a corporation is "separate from DOE, guided by appropriate business experience, and removed from the annual budget and appropriations process."

That is, I think, your summary of what you would like to see happen to make this venture market-place oriented as you just indicated. I think there is perhaps some misunderstanding.

As we meld this together, 177, which I introduced, which was the result of the Tri-Committee effort last year that you are aware of that came out of the House that was headed by the Chairman of Duke Power, some of the concepts are in 177. It would not be a private corporation at the outset, but would be an effort to get even that first step as far removed from the Secretary of Energy, from continued authorization and appropriations, but in no way would provide the privatization scheme other than when the new entity was ready they would propose it to the Congress in its final form.

I assume that you will review that from the standpoint of whether you think that has any merit, and advise the Committee in your review process of what problems you see with that approach?

Mr. **Burstein**. We will be glad to do so.

Senator **Domenici**. Frankly, it seems to me that we are all trying to go from where we are to some form of government entity, and in that move we are trying to minimize the entanglements, yet maximize its chance to move ahead, but we cannot yet privatize because obviously there is so much intervening work to do.

I am merely looking for that first phase having the best possible chance of getting itself disengaged from the government processes. That is the only purpose of it being offered as an option, or an alternative, or a companion piece of legislation. It does not intend to privatization; it intends to create as many private aspects as possible and as few government aspects as possible in that transition entity, hoping that there could be some private financing even in that first step.

I am not sure that that will work, but I understand we will hear from some experts as to whether that has some possibility even in the first step.

Mr. **Burstein**. That is certainly our common goal. In our review of these several proposals, particularly these two amendments, we shall pay particular attention, and are doing so now, to the comments you have simply put in your summary. I think that ultimately is indeed the purpose of our thrust, to make sure that we can get from where we are now, which is agreeably unsatisfactory, to the desired privatization in the least painful and most timely manner.

Senator **Domenici**. Thank you very much, Mr. Chairman.

Senator **Ford**. Thank you, Senator.

Senator Johnston, any further questions?

The **Chairman**. No further questions.

Senator **Ford**. Mr. Burstein, we sure do thank you. We appreciate your courtesy today for coming and your patience with us here in answering the questions. We look forward to working with you, hopefully to a happy solution.

Mr. **Burstein**. Thank you, sir.

Senator **Ford**. The next witness will be Mr. R. Edward Chambliss, Managing Director, Salomon Brothers, Incorporated, New York.

Mr. Chambliss.

If you will identify your colleague, we will proceed. You can either highlight it, or however you wish. Your total statement will be included in the record.

STATEMENT OF R. EDWARD CHAMBLISS, JR., MANAGING DIRECTOR, SALOMON BROS., INC., ACCOMPANIED BY STEVEN BELL, MANAGER, WASHINGTON OFFICE, SALOMON BROS., INC.; AND ROGER TAYLOR, DIRECTOR, CORPORATE BOND RESEARCH DEPARTMENT, SALOMON BROS., INC.

Mr. **Chambliss**. Thank you.

Mr. Chairman, Members of the Committee, good morning. My name is Edward Chambliss. I am the Managing Director in charge of the Preferred Stock Department of Salomon Brothers of New York City. Accompanying me are Steven Bell, Manager of Salomon Brothers' Washington Office on my left; and Roger Taylor, a Director in Salomon's Corporate Bond Research Department who specializes in utilities.

I am pleased to accept the Committee's invitation to speak today about the workings of the preferred stock market, and especially about the availability of the market to the enterprise you are studying.

I am not here to address directly the public policy merits of anyone's legislative proposals. My particular area of expertise is preferred stocks, and with your permission I will confine my comments accordingly. I have already submitted a lengthy written statement to the Committee which, with your permission, I will summarize now.

Preferred stocks are less familiar to most people than common stocks. They are much different than common stocks. Both classes of stocks represent equity or ownership interests in a particular company, but common stockholders have voting rights in the company's affairs and earn a dividend that will increase or decrease according to the company's earnings. It is up to the company to decide how big the common dividend will be from quarter to quarter.

Preferred shareholders, on the other hand, rarely hold voting rights and receive a dividend that is usually in some way prearranged: a fixed rate, or a formula rate, or an auction rate. After sale, the preferred dividend is generally outside the company's control so long as it is being paid. Preferred dividends are always paid ahead of common dividends.

Preferred stocks were traditionally an obscure, low-volume market. That has changed a great deal in just the last few years. New supply climbed to $14 billion last year versus only $1.6 billion in 1981. On the auction rate side, a market begun just two years ago, more than $1.4 billion is resold now every week, an accomplishment that no one would have thought possible a couple of years ago.

The three sectors of the preferred market—fixed rates, adjustable rates, and auction rates—all work differently and are all potentially available to your enterprise. In the $35 billion fixed-rate market, one dividend is set for the life of the security which can be anywhere from five years to perpetuity. The traditional supplier of this kind of stock is the electric utility industry which has sold less in recent years because construction spending has declined.

The withdrawal of this industry leaves hard-pressed fixed-rate preferred investors, mostly insurance companies, more receptive to any new supplier, and most certainly to the profitable federally sponsored corporation.

In the adjustable rate market, issuers, most of whom are banks, sell stocks whose dividends are set according to formulas mostly using 20-year Treasury yields. In this $13 billion market, investors agree to accept formula-rate dividends that are lower than available fixed-rate dividends in exchange for the entitlement to much larger dividends in the future if Treasury rates go up.

The leading investors in this market are mutual funds who, along with other investors, will pay substantial premiums for preferred stocks offered by issuers outside the banking industry—particularly a profitable, federally sponsored corporation.

The Committee should take special note that the strongest name by far in the adjustable rate market today is a federally sponsored corporation, the Student Loan Marketing Association. SLMA sells at only 5 percent in today's market at the same time City Corp is selling at 7¼ percent, and Chase Manhattan at 8 percent. I can think of no better indication of the market's potential appetite for the preferred stock of your proposed corporation than the enthusiasm preferred investors have so clearly demonstrated already in SLMA.

The third and fastest-growing sector of the preferred market is the auction-rate sector. It is such a marked success that it now dominates both new-issue and secondary trading after only two years. In the $10 billion auction-rate market, investors contend for the dividend of a given preferred stock series every seven weeks. Since the investor is confident he can resell the stock he owns at his cost in the next auction, he bids the stock at low rates as a short-term investment even though, formally speaking, auction-rate preferreds are perpetual stocks—that is, stocks without a final maturity.

There have been more than 1,000 successful auctions in a row in this part of the market, and never an unsuccessful or incomplete auction. Leading issuers in the auction market are thrifts, banks, and insurance companies. Leading investors are corporations, insurance companies, mutual funds, and banks.

It is fair to say that in this market, as in the others, investor demand for the preferred stock of a profitable federally sponsored corporation would also be very good.

The preferred shareholder as a company owner is junior to all creditors in every way. The typical preferred investor accepts these formal equity or ownership risks in pursuit of nonequity objectives.

His primary objective is tax-preferenced income. Federal law provides that when one corporation receives dividend income from another corporation, 80 percent of that income is tax-free so as not to tax corporate earnings twice in the two corporations. In the new 34 percent corporate income tax bracket, $1000 in dividend income is worth $1400 in taxable income to the corporate investor.

So this investor is usually willing to buy preferred stocks at dividend rates that are much lower than corporate bond rates. But in order for the tax preference to work for the investor, Federal law requires that the company paying the dividend be itself fully subject to Federal taxation. It is crucial for the Committee to understand that the proposed uranium enrichment corporation must be a tax-paying entity from the start, as Assistant Secretary Rossen proposed in his testimony on Monday, if the corporation is to be successful in conventional preferred stock to the market. The corporation cannot be tax-exempt, as is suggested in S. 1100.

Most issuers of preferred stocks are attracted to the market for any or all of four reasons.

First, the payment of dividend is elective, or discretionary on the part of the issuer. There is no legal obligation to pay. Investors certainly expect it, but in times of stress the dividend may be curtailed or suspended even though it will still accumulate. That is an equity risk the preferred shareholder must assume.

While dividend suspension is an unwelcome event for both issuer and investor and is almost always a lagging indicator, not a leading indicator, of a company's problems, it is an available emergency measure. Needless to say, in mentioning this I am not predicting or prescribing any emergencies for your enterprise.

The second reason preferreds are attractive to issuers is that preferred dividend is usually nonparticipating or nondistributive. As I said at the start, the preferred shareholder receives prearranged dividend rates whether the company is making twice as much money or only half as much this year as the year before.

The important point for the Committee to focus on here is that with a new enterprise like the uranium enrichment corporation, private equity capital can be obtained in the preferred market while still leaving the Federal Government free to enjoy the benefits of the corporation's future earnings' growth and free to cash out of the corporation with a future sale of common stock when earnings' growth can command the right price, as was the Federal Government's good fortune with ConRail a few months ago.

A third attraction in preferreds is that, as was mentioned, the preferred shareholder holds no voting rights. As a passive recipient of tax preferenced income, the shareholder assumes no role in directing the operations of the company unless dividend has been suspended for some length of time, usually a year or more.

Having a large, nonvoting class of equity investors in the proposed uranium enrichment corporation would ensure that some degree of privatization is accomplished while permitting the Federal Government to maintain full operational and managerial control.

A fourth and final element of control attractive to issuers is the right of redemption on preferred stocks. Preferred stocks are callable or cancellable at prearranged prices on prearranged dates in the future at the issuer's option, so that the company can reliably substitute new, more attractive capitalization if that becomes available in the future.

Call premiums vary from stock to stock. They are usually higher for fixed rates than for adjustables. Your corporation could sell auction rate stock at no call premium at all. Prices, maturities, and call features are all negotiable between issuers and investors in the preferred market as in other financial markets, except for the common stock market.

In common stocks, the issuer who cares to buy back its own shares has to pay whatever price is asked at the time. The issuer has no prior control of that transaction. It may surprise the Committee to learn that the Congress has the power all by itself to greatly stimulate demand for the preferred stock of the proposed corporation without altering whatever structure it may have in mind for the corporation.

The Congress has that power because it has the standing to ask both the Comptroller of the Currency and the Federal Home Loan Bank Board to cooperate in setting appropriate investment policies for their regulated deposit institutions, national banks, and federally chartered thrifts.

As a rule, these institutions cannot buy common and preferred stocks. However, regulators have made exceptions to this rule in the past in the interest of pursuing important public policy goals for such federally sponsored corporations as FNMA, FRMAC, and SLMA. Most of the stocks of these agencies are legal investments for national banks and federally chartered thrifts precisely because Home Loan and the Comptroller were asked for help.

Such special eligibility has been a large part of the reason why SLMA is the strongest name in the preferred market, and why such special eligibility would help the proposed uranium enrichment corporation sell a billion dollars or more of preferred stock so long, of course, as its earnings would support that much dividend expense.

My conclusions for the Committee are clear. Enlisting the help of others in the Federal Government, qualifying the new corporation's preferred stock for bank and thrift investment, organizing it as a sound and profitable private business, doing all these things, I believe the Committee could look forward to a most enthusiastic reception from preferred stock investors all across the country, as well as the complete cooperation of Salomon Brothers and others in the securities industry.

Thank you again, Mr. Chairman, for the opportunity to speak today. I would be happy to try to answer any questions you have.

[The prepared statement of Mr. Chambliss follows:]

STATEMENT OF

R. EDWARD CHAMBLISS, JR.
MANAGING DIRECTOR
SALOMON BROTHERS INC

BEFORE

THE UNITED STATES SENATE

COMMITTEE ON ENERGY AND NATURAL RESOURCES
SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT

MAY 8, 1987

Mr. Chairman. My name is Edward Chambliss. I am the Managing Director in charge of the Preferred Stock Department of Salomon Brothers Inc, in New York City. Accompanying me are: Stephen Bell, Manager of Salomon's Washington Office, and Roger Taylor, a Director in Salomon's Corporate Bond Research Department. Mr. Taylor specializes in utility research. I'm pleased to accept the Committee's invitation to speak today about the workings of the preferred stock market, and the availability of that market to the enterprise you are studying.

At the outset I should like to make clear that I am not here to address the public-policy merits of anyone's legislative proposals. While I am very interested in your deliberations as a citizen, and while others at Salomon might be helpful to you in this discussion in the future, my particular area of expertise is the preferred stock market. With your permission, I will confine my comments accordingly.

The preferred market may be unfamiliar to many of you, because it was traditionally an obscure, low-volume product with limited investor appeal. However, the preferred market has grown rapidly in stature and in volume in recent years, so that it now accommodates issuers and investors in a size and with an ease that were unheard of as recently as 5 or 6 years ago. New issue volume in preferred stocks - the most important indicator of investor receptivity - climbed to $14 billion last year, from only $1.6 billion in 1981. In one category of preferreds - the auction-rate market - more than $10 billion of outstanding supply is bid for every 7 weeks; more for the bid, therefore, in a typical week than in a typical 8-month period 6 years ago.

There are 3 major sectors in the preferred stock market - fixed-rates, adjustable-rates, and auction rates. The fixed-rate market, the traditional preferred market, is $35 billion in outstanding supply, made up of perpetual stocks (stocks without a maturity) and sinking-fund or limited-life stocks with maturities from 5 to 40 years. The lead investors in this market are property and casualty insurance companies. They will normally provide the 40-year issuer with rates that are as much as 1% (or 100 basis points) lower than for perpetual stocks, because these investors are allowed to carry sinking-fund stocks on their books at cost, as they would corporate or municipal or government bonds, rather than marking them to market and subtracting future market losses immediately from capital, as is the case with their holdings of common and perpetual preferred stocks. The traditional issuer of fixed-rate preferreds has been the electric utility industry, which has supplied less in recent years as its construction cycle winds down. Salomon Brothers expects a new supplier of fixed-rate preferreds to be the commercial banking industry, which would under the Federal Reserve's recent "Capital Adequacy" proposals be allowed to count sinking fund preferred stocks as limited primary capital for the first time. The withdrawal of the traditional issuer - the electric utility industry - from the fixed-rate market leaves investors more receptive to any new entrant - the bank issuer, or, most certainly, the profitable federally sponsored corporate issuer.

The adjustable or formula-rate market is $13 billion in outstanding supply, a market begun 5 years ago by bank issuers who wanted to raise Fed-mandated primary capital without selling common stocks at then-depressed prices. Banks are the leading issuers of "ARPS," as this kind of preferred is called. The leading investors are mutual funds, who serve as intermediaries for other investors and who, promising diversification as well as professional management in typical industry fashion, will pay substantial premiums for preferred stock offered by issuers outside the banking industry, especially a profitable federally sponsored corporation. Indeed, the strongest name by far in today's ARP market is a federally sponsored corporation - the Student Loan Marketing Association - or Sallie Mae. Salle Mae trades 225 to 300 basis points (2 1/4% to 3%) better than major bank issuers such as Citicorp and Chase Manhattan. That is to say, Salle Mae sells at 5% in today's market at the same time Citicorp is selling at 7 1/4% and Chase Manhattan at 8%.

In the ARP market dividend is set quarterly on a pre-arranged spread or formula to a Treasury Base Yield, defined as the highest yielding of 3-month, 10-year and 20-year or sometimes 30-year Treasury securities. Here the investor is willing to accept a formula-rate dividend that is much lower than available fixed-rate dividends, in exchange for an entitlement to much larger formula dividends in the future should Treasury yields increase appreciably.

The third, and fastest-growing, sector of the preferred market is the auction-rate sector; known under various dealer trademarks as DARTS, STARS, Money Market Preferreds, and others. The auction market began in 1984 and has become such a marked success for both issuer and investor that it now dominates both new-issue and secondary markets. In 1986 auction-rates were 54% of all non- convertible new-issue preferred stock supply. In the auction-rate market investors contend for the dividend of a given preferred stock series every 7 weeks. The investor, confident that he can dispose of his position at par value in the next auction, bids the stock at low rates as a short-term investment, even though formally-speaking auction-rate preferreds are perpetual stocks. For legal reasons, the bidding is limited in each case by a Maximum Dividend Rate, a predetermined percentage of 60-day high-grade commercial paper (typically 110% to 150% of commercial paper, depending on the investment grade ratings of the particular issuer). The investor assumes the risk that a successful auction will not take place in the future, with the constraint the Maximum Dividend Rate imposes. To date there have been more than 1,000 successful or complete auctions in a row, versus no unsuccessful or incomplete auctions (auctions in which sellers are not taken out entirely at par value by new bidders). As I said before, the auction-rate market has grown to more than $10 billion re-selling every 7 weeks. New-issue supply figures understate the demand for this security, since the entire market - both new-issue and secondary or previously-issued stocks - is in play in every cycle.

Leading issuers in the auction-rate market are mortgage-backed thrift subsidiaries, banks and insurance companies. Citicorp alone sells $1 billion of preferred stock in this fashion every 49 days. Leading investors are corporations, insurance companies, mutual funds and banks. I believe it is fair to say that the demand for a profitable federally sponsored corporate issuer of auction-rate preferred stock would be great.

From the description I've given of fixed-rate, adjustable-rate and auction-rate sectors, you may have concluded that the preferred stock market works in ways that are very unlike the more familiar common stock market. That is entirely true. The typical preferred stock investor accepts formal equity risk in pursuit of non-equity objectives. His first interest is in tax-preferenced income. Since 80% of the dividend which one U.S. corporation pays to another U.S. corporation is exempt from Federal Income Tax (so as not to tax corporate earnings twice), the incorporated investor in the new 34% income-tax bracket who receives $1,000 in dividend income is in fact receiving $932 after tax, which is the taxable equivalent of $1,412. So the incorporated investor would have to receive 41% more in income in a fully taxable bond or note to break even with the preferred stock investment, and therefore the preferred stock can be attractive at dividend rates that are lower than interest rates on competing debt instruments.

The tax preference in preferred stocks - called the Dividends-Received Deduction - derives from a portion of the tax code which applies to the dividend one corporation pays another when both are fully subject to federal income taxation. In order for the proposed uranium enrichment corporation to be entitled to pay conventional dividend, it would have to be a taxable entity from the start; as Assistant Secretary Rossin proposed in his testimony to the Committee on Monday, and not as S.1100 initially envisions.

Whatever his motivation, the preferred stock investor does assume substantial equity risk. He is junior in every way to everyone involved with the issuer other than common stockholders. His dividend is paid only from the issuer's after-tax earnings and only after both principal and interest on all the issuer's debt obligations are satisfied. In liquidation, the preferred shareholder stands behind all creditors, secured and unsecured, and cannot be assured of full or even partial recovery. While the tax-preferenced nature of dividend will usually result in preferred dividend rates that are lower than interest rates for creditworthy issuers, the preferred stock of the distressed company will trade at a yield higher than the issuer's debt securities - reflecting the preferred stock's subordination on a weak balance sheet.

In addition to whatever rate incentives apply, the issuer to whom the preferred stock market is available will be attracted by four major attributes: 1) the electiveness of the dividend; 2) the non-participatory nature of the dividend; 3) the non-voting status of the preferred shareholder; and 4) the callability of the preferred stock itself.

To begin with, the issuer is under no formal legal obligation to pay dividend to the preferred shareholder. Rather, the shareholder's entitlement to dividend comes only after the issuer's board of directors elects to pay it. In times of stress the issuer may find it necessary to curtail or even suspend preferred dividend, although such dividend would typically continue to accumulate and the issuer would eventually need to pay the arrearage off before reinstating a dividend to the common stockholder. This was Chrysler's experience in the early 1980s. In case of suspension, the issuer of fixed-rate or adjustable-rate preferred stock suffers no further rate penalty in the preferred series already outstanding, the dividend rate in these stocks having been pre-set at the time of issuance. The auction-rate issuer, on the other hand, will find its resale mechanism suspended along with the dividend and its dividend accumulating on a new, more punitive formula-rate basis. Dividend suspension is an unwelcome event for both issuer and investor, of course. It is usually a lagging rather than a leading indicator of an issuer's problems. But it remains an emergency measure unavailable to an issuer in the debt markets, short of bankruptcy. Needless to say, discussing dividend suspension in front of this Committee is in no way a prediction or a prescription for the stock series whose sale you may eventually authorize.

Preferred stock dividend is usually non-participating or non-distributive. That is, the preferred investor does not expect to share in the growth or decline in the issuer's earnings year-to-year. The issuer may earn twice as much or half as much in one year as in the prior year and the preferred investor will still expect to be paid only his fixed, adjustable or auction-rate dividend. Of course, since earnings are an important component of creditworthiness, abrupt or substantial changes in the earnings picture of an issuer will affect the rates at which its preferred stock will trade in the market. In the case of outstanding adjustable and fixed-rate preferreds, again, the issuer's dividend expense is already established. In the case of auction-rate preferreds, where investors themselves reset the rates over and over again, dividend expense may very well increase or decrease in some fashion in response to earnings. The important point to remember here is that with preferred stock an issuer can raise equity and still enjoy whatever growth in earnings takes place after the preferred dividend is paid for. This may be of particular interest in the case of a new venture such as a uranium enrichment corporation, presuming the Committee is confident about the future profitability of the enterprise.

While almost all preferred stocks are non-participating, there are some notable exceptions. One federally sponsored corporation - the Federal Home Loan Mortgage Corporation - offered participatory preferred stock to its thrift and commercial bank membership in 1984. That series behaves more like common stock than preferred stock. Shareholders have a long-standing familiarity with the Freddie Mac program and can make well-informed decisions regarding the value of such earnings participation. But there would be no such body of financial institutions similarly predisposed to a new corporation such as the Committee is contemplating; so that conventional, non-participating preferred stock financing would seem to make more sense than a participating stock like Freddie Mac's, at least in the beginning.

Preferred stock is typically non-voting. The shareholder as a passive recipient of tax-preferenced dividend income assumes no role in directing the operations of the issuer. The preferred shareholder acquires voting rights (often accompanied by Board representation) only if and when dividend falls into arrears for some length of time - usually 6 quarters. Having a large non-voting class of equity investors in the proposed uranium enrichment corporation would insure that some degree of privatization would be accomplished while permitting the Federal Government to maintain the kind of operational and managerial control public policy would likely require.

A final element of control which the preferred stock market would give the proposed corporation, along with its infusion of private capital, would come from the redemption flexibility the preferred market as a rule allows the issuer. Preferred stocks are callable, or cancellable, at pre-arranged prices on pre-arranged dates at the issuer's option, so that new capitalization can be substituted in the future, of whatever kind appeals to the issuer at the time. This option, of course, does not attend a common stock offering, which the issuer may attempt to buy back, or tender for, in the future, but with no guarantee of success and at no fixed price that can be determined at the time of original distribution to investors. Call features in the preferred market differ from sector to sector, reflecting the need to compensate investors differently according to their separate investment horizons. In the fixed-rate market, long sinking-fund and perpetual stock investors usually require a call premium of par plus the dividend for the first 5 years, so that a new 9% preferred would be callable anytime between today and 1992 at 109% of its original offering price, declining in steps thereafter, to par (the original price) in 15 years. Adjustable-rate stocks are typically non-callable for 5 years, then at 103%, followed by a par call in another 5 to 10 years. An adjustable-rate issuer who enjoys particularly strong investor demand - as Sallie Mae does - may get by offering only 3 years of call protection to eager investors. In both fixed- and adjustable-rate markets these conventions can always be circumvented in exchange for greater dividend yield offered to the buyer. On the other hand, the auction-rate issuer can sell with an immediate par call, since investors are always prepared to lose auction-rate stocks at par to other, overly aggressive bidders in the next auction anyway.

Price, term and call features are all negotiable between issuer and investor in the preferred market, as in other financial markets. They are merely a function of supply and demand. It may surprise the Committee to learn that it has the power all by itself to greatly increase demand for the preferred stock of the proposed uranium enrichment corporation and therefore better accommodate supply. The Committee has the power because it has the standing to request the cooperation of national bank and federal thrift regulators - the Comptroller of the Currency and the Federal Home Loan Bank Board - in setting appropriate investment policy for their deposit institutions. As a rule, national banks and federally chartered thrifts cannot buy equities in their own portfolios. However, in the interest of pursuing important public policy goals, regulators have made exceptions for the equity securities - preferred and common stocks - of such federally-sponsored corporations as the Student Loan Marketing Association, the Federal Home Loan Mortgage Corporation and the Federal National Mortgage Association. Most of the stocks of these institutions are legal investments for national banks and federally chartered thrifts, who are otherwise uninvolved in the equity markets. Such eligibility helps to explain why Sallie Mae, as I mentioned earlier, is by far the strongest name in the adjustable-rate preferred market. The singularity which bank and thrift eligibility would give an offering of preferred stock by the proposed uranium enrichment corporation would allow the corporation, I believe, to sell billions of dollars worth of preferred stock, subject of course to investor and rating agency confidence in the ability of the new corporation to cover its dividend expenses with earnings. I am sure the Committee looks upon the mandate it would give the new corporation as having every bit as much public policy value as those mandates which Congress gave to Sallie Mae, Freddie Mac and Fannie Mae in the past.

Enlisting the help of others in the Federal Government, qualifying the new corporation's preferred stock for portfolio investment by national banks and federally chartered thrifts, charging the new corporation as vigorously and as forthrightly as its work would deserve, the Committee could look forward to an enthusiastic reception from preferred stock investors all across the country as well as the complete cooperation of Salomon Brothers and others in the securities industry.

Senator FORD. Thank you very much, Mr. Chambliss.

The financial world is somewhat foreign to me. The first six months I was married I had the checkbook, and I have not seen it since. [Laughter.]

Senator DOMENICI. That is why you have done so well. [Laughter.]

Senator FORD. Pete, I would say a few things, but I think I will leave them unsaid at this point.

Senator DOMENICI. Thank you very much. [Laughter.]

Senator FORD. You are entirely welcome. At least I can get them all in one car. [Laughter.]

Senator DOMENICI. There is no doubt about that, Mr. Chairman.

Senator FORD. You know, when we lose our good humor in this place, we might as well go home. So we all have a good time here, on occasions.

Let me fire a couple of questions at you, three or four, and I think you can answer yes, or no. I just want to get the kind of scheme of things here, and then go on to some basic questions.

In your testimony, I think "preferred stock" is kind of a misleading name. When you start reading "preferred stock," as I listened to you, we are not even entitled to dividends if we buy preferred stock. Is that correct?

Mr. CHAMBLISS. You do not have the legal entitlement to dividends unless and until the board of directors declares that. But you certainly invest with the expectation of dividends, and there are penalties the issuer pays if he does not pay your dividends.

Senator FORD. I understand that, and we all invest with the anticipation of making money. Invest tonight, and sell in the morning and be rich. That is the view.

So I take it from your testimony that investing preferred stock is to receive the fixed returns associated with owning a debt?

Mr. CHAMBLISS. Yes, a fixed return or a formula return or an auction rate return.

Senator FORD. Even though it may be a greater risk, but at the same time an investor in preferred stock can obtain certain tax benefits.

Mr. CHAMBLISS. Yes, sir.

Senator FORD. Because those fixed returns are dividends on equity and not on debt?

Mr. CHAMBLISS. That is right, sir.

Senator FORD. In order for the tax benefits to exist—and I think you said this—the corporate entity issuing preferred stock has to be fully taxable?

Mr. CHAMBLISS. Subject to taxation.

Senator FORD. Subject to taxation. Would it be a fair statement to say that from an insurer's standpoint—"issuer's" I am sorry, it is the old insurance agent who cannot pronounce anything but insurance. [Laughter.]

From that issuer's standpoint, preferred stock more or less fills the financing function of debt.

Mr. CHAMBLISS. It can, very often, Mr. Chairman.

Senator FORD. Most often?

Mr. **Chambliss**. Not recently for the banking system, Mr. Chairman. The banking system has been a large issuer of preferred stocks raising equity capital——

Senator **Ford**. We are not talking about a banking institution here now, we are talking about buying a government corp as it relates to a sick entity.

Mr. **Chambliss**. The preferred market has some of the objectives that are the kind you might expect to see in the debt markets, but the investor does carry equity risk. You can ask, for instance, the shareholders of Continental Illinois National Bank.

Senator **Ford**. I am asking it from an issuer's standpoint now.

Mr. **Chambliss**. Different issuers will have different objectives. Many of them will have——

Senator **Ford**. Stay with me on this one. Do not give me stockmarketese now. Just stay with me in this parameter. Put your blinkers on and talk about this one entity now.

Mr. **Chambliss**. This particular corporation may have debt-like objectives in issuing preferred. You may have equity-like objectives. It is really up to you to determine.

Perhaps my colleague, Roger Taylor, might have more to say about that.

Mr. **Taylor**. I think, sir, it is here potentially a combination of the two, and it is really a function of what kind of objectives you might have in coming with an issue of preferred. Clearly there are elements of both equity and debt characteristics here.

Senator **Ford**. Would you give to me what objectives the issuer might have other than taking care of the debt?

Mr. **Taylor**. Well, the objective would be to sell a more junior security such that——

Senator **Ford**. What is a "more junior security"? Is that one with less——

Mr. **Taylor**. Less certainty of payment.

Senator **Ford**. Okay, so it is not a perfect risk.

Mr. **Taylor**. Exactly, such that in times of extreme difficulty or duress in fact payments could be suspended. Now that is typically——

Senator **Ford**. Is that like a debenture?

Mr. **Taylor**. No, sir. A debenture——

Senator **Ford**. A debenture you just throw in your money and hope you get it back?

Mr. **Taylor**. Well, skipping a payment on a debenture is reason for acceleration of debt, and the creditors can jam you into Chapter 11. With preferred stock, generally speaking if you skip payment for four quarters—now here I am talking about the corporate market—the stockholders will have a right to elect certain members of the board of directors such that their voice is increased. In some cases that may be just two members; in some cases, for certain utility companies for example, that is a majority of the board of directors.

Senator **Ford**. Mr. Chambliss, everything you said is critically dependent I think upon the profitability of the corporation issuing the stock. Is that not correct?

Mr. **Chambliss**. Yes, Mr. Chairman.

Senator **Ford**. Most of our witnesses today and on Monday have indicated that immediate privatization is not desirable—consider going private today with all the liabilities the business has—and I underscore "not"; that we must fix the enterprise, and then consider going to the private sector. It is possible, is it not?

Mr. **Chambliss**. I think the—yes, Mr. Chairman, if the financial strength of the company supports the payment of dividend. You cannot sell a preferred stock where the investor has no immediate expectation of the payment of dividend. You would get a much better rate in the market if you came with your preferred stock offering after the corporation had been made profitable, after investors had more reason to expect profits.

Senator **Ford**. You just told me something, and I want to go back to that in the record. Mark that will you, with an asterisk?

The **Reporter**. Yes, sir.

Senator **Ford**. So you are saying it would be much better, you would get a better price, the value would be there to entice people to purchases, and I think that is a significant statement, and I appreciate you saying that.

We just heard from Mr. Burstein, and I am sure you were listening to him, that the cost of capital would increase with privatization. Do you agree with him?

Mr. **Chambliss**. Mr. Chairman, I presume the cost of capital presently comes from the Federal Government's own cost of capital.

Senator **Ford**. Well, do you agree or disagree with his position?

Mr. **Taylor**. We agree with his position.

Senator **Ford**. You agree. In light of everything you have said about the purposes of preferred stock, would it not be highly unusual for a preferred stockholder to have any kind of voting rights, or have the voting rights of common equity owners?

Mr. **Chambliss**. Yes, Mr. Chairman, so long as dividends are being paid on time. I do not know of a preferred—I know of very few preferred stocks where there is any kind of voting right to the preferred shareholder while the preferred shareholder is being paid promptly.

Senator **Ford**. Okay, so basically they will have shares with no rights?

Mr. **Chambliss**. That is right, Mr. Chairman.

Senator **Ford**. Would any government guarantees be required to create the right environment for sale of stock to private investors?

Mr. **Chambliss**. Mr. Chairman, a government guarantee of the dividend?

Senator **Ford**. Would any government guarantees—I am talking about any government guarantees—be required to create the right environment for sale of stock to private investors?

Mr. **Chambliss**. I think Roger would like to answer that.

Mr. **Taylor**. I think that under the current set of financial circumstances in which this enterprise finds itself, that some kind of government support or backstopping would be required if you wanted to come to the market in the near-term with an issue of preferred stock, especially in any size.

As Eddie has indicated in his testimony, and I think he was fairly conservative, down the road as a profitable corporation I do not think there would be any such requirement.

Senator **Ford**. Down the road, if it is on its feet. So that is basically what you heard here this morning, to make it a private entity-government corporation, get it on its feet and get it going, and then trigger into the private sector.

Mr. **Taylor**. Well, I think that if you want to maximize ultimate value of the corporation to the government, that is probably the way to do it.

Senator **Ford**. Is that not our responsibility? Would you not expect that of us to do exactly what you just said?

Mr. **Taylor**. Yes, sir.

Senator **Ford**. Thank you very much.

Senator Johnston.

The **Chairman**. Gentlemen, as I listened to your last answer, you seemed to be saying that the only way you can sell private stock, preferred stock, is to have some government guarantees of that. Now is that not sort of defeating the whole purpose of access to private markets?

Mr. **Taylor**. Let me address that just briefly. I think it is really a function here of your goals and what you would like to achieve, and at what point in time.

For example, when I indicated government backstopping, I am not talking about a guarantee, but effectively something that might work as a guarantee, such as a draw on the Treasury to meet all legitimate expenses as defined, that sort of thing.

You could come to market on that basis and sell an issue of preferred that would be extremely well received and provide you with the kind of cashout or value back to the government in terms of the proceeds from that sale that you would get——

The **Chairman**. Well, the government would be guaranteeing the corporation in that instance.

Mr. **Taylor**. Well, in essence, I am not sure that that—you know, again it is really a function of your goals. The answer is, in essence, yes.

The **Chairman**. Because, see, the problem is I think one of the principal advantages of the mixed corporation is that you could get it far enough away from the government that we can get it off budget so you do not have to come up here for annual appropriations. But if you are going to have it guaranteed in effect by the government in whole or in part, then you clearly defeat that.

Mr. **Chambliss**. Senator, there is a difference between some kind of backing to the viability of the corporation and Federal backing of the dividend. There can be no Federal backing of the dividend.

The **Chairman**. Well, I understand that——

Senator **Domenici**. Would you yield, Bennett?

The **Chairman**. Yes.

Senator **Domenici**. Frankly, not from your standpoint, and I am sorry Senator Ford is gone, but frankly I think there is a total misunderstanding of what my bill is trying to do. I think as soon as we talk of preferred stock, somebody thinks that means we privatize the company. That is not the case at all.

As a matter of fact, the testimony is that a huge number of successful government-owned corporations have used preferred stock, and they have cited the best in the country. What I tried to do, and it may not work, is to analyze: why do we have to retain a tie to the Federal finance bank window and to annual appropriations and authorization?

What I have tried to do is say: Is there a way, since everybody wants out from under that, is there a way with this vehicle called preferred stock to bridge that gap as a financing mechanism for the interim?

It would be a government-owned corporation. It would not be privatized. They are suggesting the parameters for which you might pick up dollars in this initial move.

The **Chairman**. What I am saying is, if your goal is to get out from under not only FFB but to have that borrowing off budget so that you do not have to deal with the vagaries of congressional policy, then it seems to me to be inconsistent with that if you have in effect government guarantees not of the dividend, but of the shortfalls of the corporation.

I would further suggest that you would also need some government guarantees of policy, because your competition here are in effect other governments. Unless you are going to pay a much higher risk factor for those bonds, you have got to be willing to say, yes, we are going to stay in business and, yes, we are going to ensure a certain market share. Otherwise, you are paying a much higher risk.

You have the disadvantages of paying the higher rate, and the disadvantages of—well, none of the advantages of having the private corporations. So it seems to me that we are better off, at least initially, in being a public corporation, a government corporation as opposed to a mixed corporation.

I just do not see how this preferred stock gets you a better deal for the taxpayer. It looks like it is more expensive—who knows how much more expensive; how many additional points you have to pay.

Now am I wrong in that?

Mr. **Taylor**. In terms of the expense, I would be cautious here. As Eddie indicated, rates for SLMC preferred——

Senator **Ford**. Pull a mike over there.

Mr. **Taylor**. Rates for SLMC preferred presently are about 5 percent, even though in a tax-adjusted basis——

The **Chairman**. Well, that is about as close to a government guarantee as you can get, is it not?

Mr. **Taylor**. Yes. Well, again, that is——

The **Chairman**. And that does not depend on whether EURODIF or URENCO are going to subsidize their uranium sales and shoot you out of your market share. Is that not true? Are your investors not going to want to know about all these things, what are your plans for nuclear energy——

Mr. **Taylor**. I think that if you have a situation where you have government backstopping everything else becomes academic. You simply structure it with a framework such that that investor is simply not going to get hurt. Again, that would make everything academic.

The **Chairman**. In effect, you have got to give all these government guarantees in order to make this "private" preferred stock approach but not equal Federal Financing Bank rates.

Mr. **Chambliss**. Senator, I think you would make a very tough preferred stock customer. I think that quite frankly the preferred investor probably would not ask questions in as much detail as you have, although certainly the rating agencies would, and Mr. Taylor used to work for one.

I think investors, certainly in the case of SLMC, infer a creditworthiness that is implicit in Federal sponsorship. They presume that you are not creating an entity in order to see it sink. I do not think they would be hanging on every detail of the sort of that you properly are concerned with.

The **Chairman**. If these were bonds, would they not be calling them "junk preferred stock"? [Laughter.]

Mr. **Chambliss**. Hardly, Senator. I think that these would—that the preferred stock of this entity would step to the front of the preferred market.

The **Chairman**. Because of the government guarantees?

Mr. **Chambliss**. Because of the Federal sponsorship.

The **Chairman**. Thank you.

Senator **Domenici**. What I wanted to say, in Senator Ford's absence, and I said it partially, and I just wanted to repeat it. Senator, I am not proposing in my bill that we consider preferred stock. Number one, I am not moving toward privatization. It is still a government corporation.

Number two, I was trying to find a way—as I assume the group asked to challenge this called the Tri-Committee headed by Duke Power, they were asked by three committees in the House to look at this, and what they were trying to do was to minimize the relationship to the Department of Energy, to the Federal Finance Bank, and to annual appropriations.

One way of doing it that they suggested was the issuance of preferred stock to fill that gap. Even if it had to be guaranteed, I say to my friend the Chairman, you still would have to analyze whether that would give this corporation a better chance to succeed than to continue under the annual appropriations and authorizing process.

Yes, if it was guaranteed, depending upon the conditions that might show up on a budget. So I am not in a competition with Senator Ford for privatization and public, I was just looking for a mechanism to do as much as we could in the government-owned corporation to disengage from those things that we are being told may doom the enterprise.

It may indeed need subsidy, I say to my friend, under a new corporate setup that is totally public—excuse me, that the public owns, we may still have to continue to subsidize it. There is no assurance that you have set this new corporation up. There is no preferred stock. You have a manager as prescribed. Remember, under that proposal they are still responsible to the DOE.

We still have annual authorizations and appropriations. The fees that they collect are still subject to it. So I am really not involved in a competitive situation with anyone here. I am not in conflict. I did not ask that you bring the private sector up here to discuss preferred stock in order to have a conflict. They know a lot more than I know about how do you use preferred stock, and they are trying to suggest that maybe in the interim when you set up the corporation that is all government owned that maybe one way to pick up the dollars that will get you out from under the entanglements that you want out from under is the preferred stock vehicle, and maybe it will not work.

Maybe as you set it up and you go out to the experts and say what else would we have to do to pick up a billion dollars of preferred stock, they may tell you the way you have structured it it will not work. But they may also say if you change A, B, C, D, it may work.

The CHAIRMAN. One of the things that comes to mind in this discussion is—and we ought to look at the feasibility of it—is to at least have a two-year budget as you have suggested for the rest of the budget, but we certainly could do it for this corporation as we set it up initially.

Senator DOMENICI. Could be.

Senator FORD. Let us pour a little oil on the water here. I do not understand the stock market. As I looked last night and tried to read understand, see, if I had been out there I would have sold when the market reached 1600.

Mr. CHAMBLISS. A lot of people did, Mr. Chairman.

Senator FORD. I understand that, but what I am trying to do is to understand what is here and what you all are saying, and what would happen to preferred stock.

Now I understand there are no voting rights by preferred stock unless you fail to pay a dividend. Well, the prospects of paying a dividend up front are somewhat bleak. So therefore the preferred stock then would have their voting rights. Under this procedure, I think there are two members of the preferred stock on the board owners.

Senator DOMENICI. No.

Senator FORD. Well, that is the way I read it. It would give them direct voting rights.

Senator DOMENICI. It is not my intention. What I indicated is that you start with a board made up of so many people.

Senator FORD. Five, I think.

Senator DOMENICI. And then if you issue preferred stock in a certain amount, there would be two members added to the board of directors. But it does not say that they elect them.

Senator FORD. Well——

Senator DOMENICI. So what you are looking at is some way to, at that point, inject some outside directors, outside the first ones we appoint. That is all it says. I assume that might be the utility companies so as to add some credence to the situation. It may be somebody that is involved in the nuclear business so that they have a voice in making sure that the board has outside impact that will lend some credibility to the issue.

Senator FORD. It took me a long time to get to my position, as it is here, but we started some time ago looking at this, both of us, and maybe somewhat from different angles but with the same end result. I purposely put No. 176 not under the typical budget and appropriations process; it is under the Government Corporate Control Act. Then there is no requirement that Congress act in the budget process.

So that is kind of where I have organized mine, and I kind of thought from the testimony we had Monday that—but it is not mandated. This is what I was getting to earlier, Pete, when I said if it is necessary and have to do it we can do it. Otherwise, we keep just a thread over here and the rope is already gone in this other corporate entity.

I asked some pointed questions because I need to know, and I think you agree that when I ask the questions here and you said it was my responsibility to protect the taxpayers, and maybe a little more so than the normal stock purchaser. So I have learned a lot today.

Is there any possibility of a harvest situation in this? You are shaking your head.

Mr. Taylor. I think that is something that obviously you would like to be concerned about, and that may lead you to make decisions to inhibit such a potential event, and that may include Federal charter with certain restrictions or a certain framework in which ultimately a private company could operate, or it may also include some permanent government position in the management structure or on the board of directors.

Senator Ford. Well, am I correct with the captive customers that you have that you could raise those prices ultimately to have a large income at the end of those contracts, that it would be on the market for nothing? We would be out of business?

Unless you are saying to me that if we do not prevent it, it could happen?

Mr. Taylor. What I am saying is, if you are not judicious, you can harvest this business and attempt to maximize profit in the short term, and wind up destroying the business in the long term.

Senator Ford. Okay.

Mr. Taylor. That is I presume what you are talking about, and certainly it is not the objective of this enterprise.

The Chairman. Mr. Chairman?

Senator Ford. Go ahead.

The Chairman. I have got to go back for an interview at the office. I would just like to say that this has been a good panel, and I especially enjoyed Steve Bell's testimony. That is the best testimony he has ever given. [Laughter.]

Senator Domenici. He was very effective.

Senator Ford. Congratulations, Steve.

But I have been noticing him on television giving astute observations here recently. I listen every time I see him.

Senator Domenici. At 5:30 in the morning?

Senator Ford. That is the time I get up and do my best work.

Senator Domenici. Oh, 6:30?

Mr. Chairman, might I just say this before the Chairman of the Committee has to leave. Frankly, aside and apart from how you get the board of directors, how many there ought to be, all I am suggesting is that as we move through setting up a corporate structure, that I think it would be worthwhile to end up with a situation where we could ask the marketplace—it does not have to be Salomon, just ask—is there a place for outside financing to get us out from under some relationships that we do not think are in the best interests of the corporate entity that we are creating?

Really, that is all this is. We might be surprised that indeed we could raise on the outside with nothing more than, nor the idea that we are going to set up this corporation, and what we are putting in it and what we are going to do for that corporation. We are going to have to set the debt with DOE some way. We are going to have to solve the demand problem with the TVA. There are these assets around—just to see if indeed there is an opportunity. That is the only reason that the Tri-Committee in response to the House suggested the possibility of an injection of outside capital with preferred stock.

I think that is where they got into the situation. It may very well be that the policy decisions we want to make that come up front of that vacuum of where do we get that money, it may be that they are such that it renders this injection of capital impossible just as a marketplace reality.

It also may mean that if you have done that to the corporation that you have set up, that the marketplace might tell you the reason preferred stock will not work is because it is not going to work.

I think it is worthwhile to find out. One thing we have learned around here is that some marketplace clearance in some of these ventures is a very good test of how they are going to work. I do not know if you remember, just as an aside, irrelevant to this but about the marketplace, we were about to put the Corps of Engineers at one point into the business of building deep ports.

Somebody from Wall Street came before a committee, and I was there, and I said "what in the world is Wall Street doing here at a meeting about building deep ports?" And they said, why do you not let each port that is going to build one of these, why do you not give them the authority to finance it, and you give them minimal assurances, and the marketplace will tell you where the deep ports belong, or if you need them.

It turned out that Congress waited around awhile and thought about it, and instead of building the ten that we picked, it turned out that where they were really needed they would get built. In a sense, that is the only reason for this.

The CHAIRMAN. I think some of those oil companies would tell you they have built them in the wrong place. [Laughter.]

Senator DOMENICI. Well, we did not build any, in fact. We only built one, I think, because we thought we needed eight or ten, but it turned out we did not, anyway.

Senator FORD. Well, we financed one down in Colombia.

Senator DOMENICI. In Columbia? The Carolinas, or the foreign country?

Senator FORD. The foreign country.

Senator DOMENICI. I am unaware of that. But that is my only purpose for putting this is, to see if as a matter of fact it fits as you put the scheme together for outside money.

Senator FORD. Since you make your living selling stock and interesting people, how would this entity fare if we allowed additional competition in this country?

Mr. CHAMBLISS. Additional competition for?

Senator FORD. Uranium enrichment, the selling of SWUs.

Mr. TAYLOR. I think we have——

Senator **Ford**. It would not be enhanced, would it?

Mr. **Taylor**. Obviously not, sir. But we have a competitive worldwide situation today, in sharp contrast to the situation a decade or so ago.

I do not think that the competitive situation is going to go away unless trade steps are taken to attempt to minimize it, or curtail it, or eliminate it all together as legislative steps.

Allowing additional competition in the United States will ultimately of course heat up the competitive environment and make it a somewhat more risky environment for every entity in the business.

Senator **Ford**. It would make it more risky.

Thank you, gentlemen. We may have some questions for you for the record. We will submit those in writing and hope you will respond to them in a timely manner.

Mr. **Chambliss**. Thank you, Senator.

Senator **Ford**. Thank you, very much.

Our next witness and our last witness for today is C. Paul Robinson, Group Vice President, Ebasco, Incorporated, New York, on behalf of the American Enrichment Corporation.

STATEMENT OF DR. C. PAUL ROBINSON, SENIOR VICE PRESIDENT AND PRINCIPAL SCIENTIST, EBASCO SERVICES, INC., ON BEHALF OF THE AMERICAN ENRICHMENT CO., ACCOMPANIED BY DONALD REPICI, AMERICAN ENRICHMENT CO., AND JOHN LaFOND, AMERICAN ENRICHMENT CO.

Dr. **Robinson**. Mr. Chairman, my two colleagues, Dr. Don Repici, and John LaFond are with me today. I submitted a formal statement for the record, and I would like to concentrate on a few brief remarks in the context of the discussion this morning.

Senator **Ford**. That will be fine, and your statement will be included in the record.

Dr. **Robinson**. Thank you.

The American Enrichment Company, Incorporated, is comprised of a group of substantial industrial firms. My firm, Ebasco Services, Incorporated, which is a subsidiary of ENSERCH Corporation of Dallas, Texas, is a major engineering, construction, and industrial operations firm.

We have been involved in the electric power generating industry for a long time, particularly in nuclear electrical generating plants. We would provide the engineering, construction, and operation personnel for the AEC plan. The Boeing Company subsidiary, Boeing-Tennessee, was one of three gas centrifuge manufacturers in the earlier government program, and they would produce new and replacement centrifuge machines for this venture.

E.F. Hutton is AEC's financial adviser and would serve as our investment banker in trying to raise capital for this venture. The Washington, D.C. law firm of Shaw, Pittman, Potts & Trowbridge is our counsel.

I believe the U.S. enrichment enterprise is in very grave trouble today. I of course applaud your efforts to put it back together. In his testimony last month before one of the House committees, Bill Lee, who is the Chairman of Duke Power, said if the U.S. enrichment enterprise were a corporation today, its first order of business would be to file for Chapter 11 bankruptcy. I concur with Mr. Lee in that statement.

Senator FORD. That is provided we do not fix it.

Dr. ROBINSON. Exactly.

Senator FORD. Thank you.

Dr. ROBINSON. For the last decade, half of their market has been taken away by foreign competitors. Today they have only the gaseous diffusion technology, which is coupled to the use of enormous amounts of electricity. They have no new technology such as the foreign competitors have, which would use only a small amount of electricity.

The situation is bad today, I believe. It could be worse in the future. The Japanese companies are gearing up to launch a gas centrifuge business of their own which could greatly interfere with our competitiveness in the future. If we are not careful, I think the United States can lose out in the total future market for enrichment.

With this comes another problem of our national energy security. Nuclear fuel is itself an alternative to imported oil and gas, but here again this could go overseas and we could be subject to a new OPEC controlling the price we would pay for our energy.

The close coupling between enrichment and mining is such that I believe if the U.S. enrichment industry goes offshore, mining will go offshore with it. Action is needed today not only to solve the problems of the near-term, but also to look for a mid-term and longer term.

The inherent tie to electric power costs for the gaseous diffusion plants are what makes us a doubtful competitor today. The future looks very bleak if the cost of electric power rises in the mid-term and in the long-term, as we believe it will.

There are two things you could do. You could continue to subsidize the program by supporting some artificial pricing scheme for separative work. You could try to find in the framework of a private company a way to make that enterprise profitable so a portion of those profits could be invested in the very new technology that is going to be required for the future.

Now I am sure you would opt for the second approach, but it is not going to be an easy road. As with any industry which is facing backruptcy, what one would try and do is to retrench to a core business that you think could be the most profitable. For gaseous diffusion tied to electric power, we believe that core that you would retrench to is built around operating your plants in the near-term with cheap, off-peak power.

The gaseous diffusion plants can be economically operated with a maximum of off-peak power setting a production rate of between 12 and 14 million separative work units a year. At that condition, it can be competitive, though just barely competitive, with the foreign market.

If you try and increase production above that level, the costs are going to rise significantly. At that point, the gaseous diffusion plants no longer can be economical in the world market. You have few options. I think you have got to have a more effective technology that uses less electrical power.

Two options exist for that technology. First, the centrifuge technology which the U.S. developed and invested $2.7 billion in moving forward to partially completing a plant at Portsmouth, Ohio, before the pressure on Federal outlays stopped that initiative. The centrifuge technology is what the Europeans have used, which have stolen a significant share of our market.

Secondly, there is the laser isotope separation possibility such as the atomic vapor AVLIS process. But in the request from the administration this year, they would zero the funds for pursuing AVLIS R&D.

Under our initiative, the AEC, Inc., would use private capital funds to finish and complete and bring into operation a portion of that plant at Portsmouth, Ohio. We believe the output performance from that plant would be so good that one can consider in the midterm blending some of its product with the marginally competitive higher cost gaseous diffusion to go after more of the international market.

By doing this, I think it is the only route you have to stretch out the useful economic life of the gaseous diffusion plants and still be competitive in the world market.

Second, if you can find a way to restore the U.S. enterprise to profitability, that profit you make can be invested in the advanced technology such as AVLIS which we are going to need. The U.S. should not have to subsidize this industry. With the infusion of private funds as we are suggesting, the subsidies would not be necessary.

Now we have been advocating this concept of ours for nearly two years now, that the centrifuge technology needs to go on line and we need to get some result of that large investment. I confess today that we are proud to see that the concept has been recognized, at least to the extent that some of the privatization bills you are looking at would include the centrifuge technology as a part of the government enrichment corporation.

However, let me say I believe that if you include it, rather than letting it move forward as a private industry enterprise, I believe it is doomed.

The cost-effective deployment of the gas centrifuge enrichment plant has four critical elements. First of all, there is the technology base, the centrifuge technology, which the U.S. led and developed.

Second, that partially completed facility has zero value today and has been declared excess, and the government has been looking for any other use that could be made of it.

Third are the trained Boeing personnel, the people who can manufacture new and replacement centrifuge machines to keep an enterprise going.

Finally, the complete vendor supply network which was established over the whole country during the earlier DOE program. It has nearly gone away, and unless action can be taken soon I think that vendor network will evaporate.

A new government corporation faced with a massive array of problems, we have already heard that it faces today, is going to take quite a length of time to organize itself. I think it will be years before it could really get around to the centrifuge plant issue. By that time, those four critical elements are going to be gone.

Now you could try and rejuvenate them. It may not be impossible, but it would certainly cost a lot more than if it could proceed now. Let me close with a number of reasons why you should not include GCEP in the legislation, but should on the other hand encourage the Department of Energy to get on with negotiating with AEC, Inc., to bring this private centrifuge initiative into being.

First, the technology infrastructure nearly died. It will surely vanish, if not rejuvenated now. With its demise, all of that $2.7 billion is down the drain, and GCEP as it exists at Portsmouth will be totally worthless.

Gaseous diffusion I am afraid is a technology dynosaur in the world marketplace. The marketplace knows that. Our competitors know it. We have shown a route to you where even with increasing electrical energy costs, the useful economic life of those gaseous diffusion plants could be extended.

Thirdly, the AEC initiative would bring critical private investment capital into the U.S. enterprise without government guarantees. At the same time, it would create 500 new jobs and a continuing source of tax and other revenue into Federal, State, and local governments. Our business plan would show over $500 million in Federal taxes and royalties during the first 15 years of this operation.

Fourth, the U.S. enrichment industry is perilously close to that bankruptcy condition. Without the rejuvenation which you are trying to do and the private investment which we would bring, the U.S. will lose out to foreign competition and not only future jobs but all the existing jobs and future revenues would move off of our shores, just as has happened to many other manufacturing industries in the U.S.

Finally, the government today has said it does not have the money to develop GCEP or AVLIS. We have shown a path that you could have both. The centrifuge could be what it was intended to be, a technological bridge to AVLIS and the future in enterprise.

I thank you, sir, for your attention. My colleagues and I would be happy to answer some questions.

[The prepared statement of Dr. Robinson follows:]

TESTIMONY
PRESENTED BEFORE

THE SENATE ENERGY AND NATURAL RESOURCES COMMITTEE

SUBCOMMITTEE ON ENERGY RESEARCH AND DEVELOPMENT

MAY 8, 1987

BY DR. C. PAUL ROBINSON
SENIOR VICE PRESIDENT AND PRINCIPAL SCIENTIST
EBASCO SERVICES INCORPORATED

Mr. Chairman, I am pleased to come before this Subcommittee today as spokesman for the American Enrichment Company, Inc. (AEC), to address certain aspects of the Subcommittee's deliberations on the issue of restructing this country's uranium enrichment enterprise.

As you are aware, AEC proposes to deploy a portion of the abandoned gas centrifuge enrichment plant (GCEP) at Portsmouth, Ohio, and its related uranium enrichment technology as a commercial business using private capital. Your committee has addressed the larger issue of overall restructuring of the nation's uranium enrichment program as embodied in various bills before your subcommittee. We all recognize that the U.S. enrichment program is in trouble: it is non-competitive today and is certain to be less so in the future. I would like to show how the AEC program can significantly augment the DOE program and help make the domestic uranium enrichment industry both competitive and profitable. We believe that the AEC enterprise can significantly contribute to extending the economic viability of the existing gaseous diffusion plants at Portsmouth and at Paducah. This is good for Ohio and Kentucky. To demonstrate this compatibility and assistance from AEC, let me review the specific vulnerabilies of the Government enrichment enterprise and then indicate the specific role which AEC can play in overcoming those vulnerabilities.

Despite DOE's best efforts and technical management of its gaseous diffusion operations, DOE must operate in an institutional framework which does not offer management the flexibility to utilize its assets in a truly business-like fashion. Your effort to restructure the DOE program as a government corporation is attempting to address this institutional question. Unfortunately, whether as a corporation or as a governmental unit, DOE: (1) must find a way to make its current GDP operations cost competitive, and (2) must generate sufficient excess cash flow or "profit" to fund its next generation of technology, e.g., the Atomic Vapor Laser Isotope Separation (AVLIS) process.

Let me review the biggest problems DOE must solve and how the AEC operation can help the overall solution:

Cost of Power for GDP

The DOE Enterprise recovery strategy, upon which DOE depends to maintain its market share, calls for the continued availability of cheap electrical power from the OVEC plants to supply the Piketon gaseous diffusion operations. DOE has assumed the availability of this base load power well into the next century at the current rate of about 17-18 mills per kilowatt hour. However, the OVEC contracts expire in October 1992 and there is no necessity that those contracts be renewed or be renewed at an attractive rate. Consequently, at that time, the owners of OVEC, primarily Ohio and Pennsylvania utilities, will be free to sell their power to whomever they choose at whatever the market rate may be. Existing large industrial customers in the southern Ohio area are today paying 35-40 mills for firm electrical power. The cost of electricity in 1992 might well be even higher. After October 1992, the electric rate payers of Ohio would be subsidizing the federal government if DOE were permitted to purchase power at 1/2 the industrial rate Ohio consumers must pay. It seems unlikely that the Ohio Public Utilities Commission would permit OVEC to sell power to DOE at such a subsidized rate. The Portsmouth plants clearly are important to southern Ohio, and a degree of subsidy by the consumer may be appropriate, especially today when electrical power is so plentiful. However, as we get into the 1990s, the Portsmouth operations must make real economic sense or their long-term viability will be in doubt. This is precisely the situation where the centrifuge process, which uses a minimal amount of electricity, can be of the greatest benefit.

GDP Operations Strategy

The current operational strategy employed by DOE is to maximize its market share, a goal which has been impossible to achieve because of foreign competition. Since DOE is the only U.S. domestic producer of enrichment services, any loss of market share represents a loss of revenue, balance of trade and jobs to these foreign competitors. However, if DOE ran its operations so as to maximize "profit" (or unassigned excess cash flow), instead of simply seeking to maximize market share, the enterprise could be restructured as a growing, profitable business. Let me explain. The principal costs of operating the GDPs are a combination of base load power and off-peak power. As long as DOE can use the maximum amount of less expensive off-peak power, it can maximize its profit margins and hence the amount of money available to fund other requirements such as the AVLIS process.

The most cost effective level of operation (i.e., using a maximum amount of off-peak power) for the two gaseous diffusion plants is in a region between 12 and 14 million SWU. This is considerably above the current production levels, but is a level that is expected to be reached in the early 1990s (according to DOE estimates of demand for enriching services). At these levels of production, the GDP achieves maximum cost effectiveness and hence generates the maximum amount of "profit". Production beyond that level is less cost effective because expensive base load power must be substituted for inexpensive off-peak power.

The deployment of one million SWU of gas centrifuge capacity, as proposed by AEC, requires the completion of the support infrastructure at the GCEP facility using private money. Once that infrastructure is in place, it would permit expansion within those facilities on an extremely cost effective basis of an additional two to three million SWU, also with private investment, in a time period which is short when compared to the identification of need. Consequently, the AEC project, although it is only rated at a million SWU today, has the potential to cost effectively produce three to four million SWU at GCEP. At that level of production, AEC could serve the market the GDPs cannot handle economically and also help regain portions of the market share previously lost to foreign competitors.

The existence of the AEC production capacity enables DOE, if it so chooses, to operate its plants in the "profit" zone, thus generating sufficient excess cash flow to fund its R&D program out of revenues while keeping SWU prices reasonable. This guarantees the long term viability of the total U.S. enrichment enterprise (GDPs, AEC, AVLIS) without government subsidy.

Funding for AVLIS

Whether as a government corporation or as a government-owned enterprise, the DOE operations need a next generation advanced technology if the entire enterprise is to survive in the long term. At this time however, there is considerable uncertainty about the Government commitment to AVLIS development, and it is not clear that AVLIS will ever be deployed. At present, AVLIS is still in the R&D stage, but DOE has requested no funding for it in FY 1988. In addition, the DOE budget plans call for the private funding of any deployment, even though the technology has not been proven at industrial scale. Earlier, budget priorities killed the Government centrifuge program and they could also kill AVLIS, and with it the viability of the U.S. enrichment enterprise.

As noted earlier, if DOE were able to operate on the basis of a strategy that maximized profit instead of maximizing market share, it would have the necessary excess cash flow or "profit" to fund a significant portion of the AVLIS development and still remain price competitive. To achieve that maximum profit strategy, DOE needs to limit its production to 12-14 million SWU/year. But, in order to do that, there needs to be other cost effective U.S. capacity available to meet the additional market beyond this level. AEC can be that other U.S. enrichment source. The DOE and AEC combination maximizes profits and taxes and keeps the jobs in the U.S. It is a "win-win" strategy.

GDP Economic Life Extension

Even if we set aside the issues of TVA demand charges and the requirement for debt repayment to the Treasury, DOE must still contend with the eventual increases in the cost of electricity needed to power its GDP operations. DOE's future competitiveness is caught in a vise between the rate of GDP power cost increases and the development schedule for AVLIS. Any extension to the economic life of the GDPs permits more time for the development and deployment of AVLIS. The AEC operations, by enabling the GDPs to be operated more cost-effectively, can extend the useful economic life of the Paducah and Portsmouth gaseous diffusion plants.

Once the GCEP infrastructure is completed by AEC, the incremental cost of additional centrifuge-based SWU production will be less than $40 per SWU. This is sufficiently attractive to permit the mixing or "blending" of marginally non-competitive diffusion-based SWU production with very competitive GCEP-based production to still produce a competitive product. In effect, DOE and AEC could mix their production outputs to remain competetive in the world market, and thus, keep the jobs and revenues in the U.S.

Thus AEC, by retaining and deploying the centrifuge technology, acts as a no-cost insurance policy for the DOE enrichment enterprise, guaranteeing that jobs and revenues stay in the U.S.

A number of issues have been raised in recent months regarding the AEC proposal. I would like now to address those issues, especially in the context of proposed legislation before your subcommittee.

First, I want to emphasize that today, the Gas Centrifuge Enrichment Plant sits in southern Ohio as a worthless, useless monument to previous economic circumstances. The Department of Energy has been searching in vain for non-enrichment uses for the facility for nearly two years. Moreover, the Government estimates that it would cost approximately $15 million to decommission the facility so that it can be used for other purposes. AEC's plan would take a worthless facility and convert it to a viable, taxpaying, job producing, royalty-paying entity. The value of the GCEP facility is not in the real estate, but in the technology and specialized equipment and in the trained centrifuge machine manufacturing and operating personnel, on which the Government spent $2.7 billion. The only wise use of these assets is for the use originally intended.

The implementation of the AEC proposal includes financial benefits to the federal and local governments. For the federal government, these benefits include income taxes and royalties for use of the technology at a rate of about $500 million per million SWU capacity over the next 15 years, and possibly some form of equity growth. These financial benefits serve to help the Government recover some of the $2.7 billion of past investments in the centrifuge technology. For state and local governments, these benefits include state and local taxes and approximately 500 new jobs in the southern Ohio/northeastern Kentucky area.

I should emphasize that the AEC plan involves no financial risk to the Government. AEC's plan includes carrying insurance coverages to permit appropriate indemnification of the Government, and will include the establishment of a decommissioning and decontamination (D&D) fund or bond to cover any incremental D&D costs which may be incurred as a result of AEC operations.

Some have questioned why the Government would permit AEC to proceed. Since it could be viewed as a competitor not only to the foreign competetion but also to DOE itself in the enrichment marketplace. While AEC will be a competitor in the marketplace, it will be selling largely to the customers that DOE's enrichment enterprise (or a successor Government-sponsored corporation) would be losing to foreign suppliers. Based on our extensive discussions with electric utilities both here and overseas, AEC believes the United States will continue to lose a significant amount of business to European competitors if the only source of U.S. supply for the next decade or two is the U.S. gaseous diffusion plants. However, the U.S. Government and AEC together can preserve a larger market share for the country than can the Government on its own. It is far better to have two aggressive and financially healthy domestic U.S. enrichment enterprises that can both compete with the foreigners, than one large and financially weak entity.

If AEC were to be as successful as we anticipate, there is concern that we could expand too fast or market so aggressively as to significantly impinge on the commercial success of a Government-sponsored enrichment corporation. We believe these concerns have been blown out of proportion. AEC does not expect to reach even the one million SWU per year production threshold before 1995, a small fraction of DOE's production capability. If there are concerns that AEC could become too strong a competitor, Congress could mandate (1) a sliding scale of royalties payable to the Government, i.e., the rate of royalties increase as AEC production increases; (2) a time-phased limitation on production deployment; or (3) equity warrants in the AEC enterprise, so that the Government profits directly with AEC's success.

Mr. Chairman, these benefits won't happen if a government-sponsored corporation is put in control of the GCEP facility. DOE has already rejected GCEP and even if you force them to reactivate it, they can't fund both AVLIS and GCEP, and, any further delay destroys the value of GCEP. As businessmen, we feel that the time has come for us to get on with this proposal. We are frankly puzzled and disturbed by those sections of the bills which transfer the GCEP and related technology to the proposed enrichment corporation. If these provisions stand, it would require AEC to wait until an enrichment corporation has been formed, its management structure established, and its other higher priority agenda items addressed before the management would turn its attention to the possible disposition of the GCEP facility and related technology. Frankly, by the time those events occur, the equipment will be irrevocably lost simply from the passage of time, and the team of industrial partners that make up the AEC team, in all likelihood, would have chosen to follow other pursuits. Moreover, the investor capital for commercialization of GCEP would vanish. Furthermore, the world marketplace will not remain static while a new enrichment corporation incubates.

There is a misconception of what constitutes the value in GCEP. What is needed today in the U.S. is not just more enrichment capacity, but cost effective capacity. The value of GCEP is predicated on four elements: (1) the existence of the U.S.-developed centrifuge technology; (2) the existence of a nearly completed facility; (3) the ability of Boeing to cost effectively produce new centrifuge machines; and (4) the existence of a vendor supply network.

You can put items (1) and (2) on the shelf but items (3) and (4) will soon vanish and with it any real value to GCEP. Boeing still has its team of centrifuge-trained people in place, except that they are now involved with aircraft work. Also, the exclusive arrangement between Boeing and AEC contemplates Boeing manufacturing machines on the basis of "performance" criteria, not the "design" criteria mandated by DOE which allowed minimum profit potential and minimum design flexibility to the machine manufacturer. Also, a vendor supply network is still sufficiently in place to permit cost effective machine manufacture. This will all vanish if delay occurs.

This would be a shame, as the centrifuge technology and facilities have been abandoned by the Government, GCEP is now a worthless facility, and the Government has been trying in vain to find other uses for the facility. Thus, trying to fit centrifuge into a government-sponsored corporation serves only to destroy value, not preserve it. Consequently, I strongly encourage the Committee to remove reference to gas centrifuge technologies from the bills.

In closing, let me simply say that AEC needs the U.S. Government's cooperation to preserve this uranium enrichment supply technology option. AEC's plan complements and supports the thrust of the bills before your subcommittee for the restructuring of the U.S. Government's enrichment operations. I firmly believe that an enrichment corporation and the AEC could together capture more market share for the country than could such a government-sponsored corporation on its own. Finally, AEC needs the Committee's support and encouragement to the Department of Energy to pursue the implementation of the AEC plan. I hope you will provide such support and encouragement.

Senator FORD. Thank you very much, Dr. Robinson.

If the centrifuge technology were viable, why should it not be operated by DOE itself?

Dr. ROBINSON. The DOE plan was a plan that made it a lot more costly to operate. As was said by a previous speaker, they were looking at something in the range of a $9 to $10 billion total project, and at that level set up a rather elaborate number of parallel buyers in a basic policy that everything that was built by any manufacturer had to fit together perfectly so that it could all be procured from at least three to four manufacturers.

This led to overspecification on all the parts, and the cost went way up. We hope one would not consider that for the future. Certainly operating it as an industry you would not do that, and would move forward to bring the technology on-line in the cheapest way possible.

Senator FORD. Well, what makes the operation of the centrifuge viable for you and not for DOE?

Dr. ROBINSON. Let me start by saying we have some basic advantages.

Senator FORD. You want us to give you the plant.

Dr. ROBINSON. The plant has zero value. We would be happy to take it for the scrap value you have today, sir.

Senator FORD. Well, you all are awful anxious to get it if it is not worth anything.

Dr. ROBINSON. It is a major advantage. There is no question. Centrifuge is a capital-intensive industry, though not energy-intensive. With the plant which could be converted to provide initially 1 million SWUs, perhaps growing to 4 to 5 million separative work units, that plant would make a huge advantage.

If this does not move forward, all of that plant is going to be torn down. In fact, when we started with DOE, it was already in the process of being torn down, so we offered an alternative to give that some value both to you and to ourselves.

Mr. LAFOND. Senator, might I add a couple of comments? The traditional concept of value in gaseous GCEP is to look at the assets and to look at that past technology. The assumption is we can put it on the shelf. In theory, there is no reason why the government could not do it. But in practicality, it will be years.

If the vendor network disappears, and if the technology which is literally in the heads of those people go as they go to other jobs, the cost-effective deployment of GCEP evaporates. The last thing we need is more enrichment capacity in this country. We are overburdened by that. What we need is cost-effective capacity.

When it is all said and done, what we are proposing is a mechanism which saves that technology, and allows you to appropriate the benefits of it, Mr. Chairman. It is not a matter of saying whether AEC should or should not exist. If it exists and is competitive, we can use that competition at competitive advantage to help the existing U.S. industry. We can help the diffusion plants.

Senator FORD. Let me ask you this, then. What do you want from this Committee?

Dr. ROBINSON. Sir, we would like for this Committee first of all to not include the gas centrifuge within the legislation creating a new corporation, as we believe that would hamper it. We would appreciate——

Senator **Ford**. Would hamper what? You, or the corporation?

Dr. **Robinson**. I think it would certainly hamper the United States being able to deploy the centrifuge technology in any kind of a timely way, and compete against foreign centrifuges.

Senator **Ford**. Well, you are going to be in competition. If we set up that entity and leave the centrifuge out, then you just said in your statement you were going to manufacture a million SWUs a year.

Dr. **Robinson**. That is right, sir.

Senator **Ford**. That takes, what, about 4000 megawatts? How much would a million SWUs support?

Dr. **Robinson**. Let me see, I am not sure.

Senator **Ford**. It would be a little more than that, would it not?

Mr. **Repici**. About 5000 megawatts.

Mr. **LaFond**. For gaseous diffusion?

Senator **Ford**. For a reactor, I am sorry.

Mr. **LaFond**. A million SWUs would be 10 reloads a year, 10 reactors.

Dr. **Robinson**. 10 reactors per year for gaseous diffusion.

Senator **Ford**. 10,000 megawatts you are talking about.

Dr. **Robinson**. Yes. Centrifuge uses 3 percent of the energy level of gaseous diffusion, and that is the advantage that foreign centrifuge companies are taking advantage of, and the United States has got to find some way to include it.

Senator **Ford**. Well, I want to include it to make this government corporation viable. That is an important thing to me, too. If you take that out and you go the route that you want to go, that makes you more competitive than—less costly to you than it is to the corporation we are trying to set up, as I see it. Then that puts you in competition with the government corporation we are trying to get out here to work.

So what you are doing, you are taking a piece of it out that is probably as viable as anything we have.

Dr. **Robinson**. Well, sir, certainly the people you have had in charge of that enterprise in the past would not agree with you. They believe that that had no value.

Senator **Ford**. I do not agree with a lot of folks out there working for the government, so do not start throwing that at me. I have not been around here long enough to get too set in my ways. [Laughter.]

Dr. **Robinson**. There is a question of timing, of what it would take to move forward. Now I do not think being in the marketplace competition is necessarily a bad thing. One very strong thing we can say for it would be a U.S. company in competition, rather than what we are facing with the European consortium now operating, and the future Japanese centrifuge group.

Senator **Ford**. Let me just say this. One reason we are trying, or at least I am, to get this corporation out there is to make us competitive. Let us do the things. Cut the strings and let them make the decisions. Let them put it back on its feet. There are a lot of people out there who can do it. But if you start piecemealing it, then not many people are going to want to get involved. I think the whole package has to be out there to let them do the kind of job I see them doing.

You are talking about those people that have been there that will not agree with me? Sure they will not agree with me. I do not agree with them because I am trying to make it a government corporation now. So they do not agree with me coming in. They have not agreed with me up to this point, and they will not agree with me if the legislation passes, and I hope it does.

Dr. **ROBINSON**. One of the problems you will have in trying to sell stock in the total enterprise——

Senator **FORD**. I am not trying to sell stock.

Dr. **ROBINSON**. The company, I believe, will have to find some way to have private financing if it really is going to be a step toward a private company and not within the government appropriations.

Within that, it is going to be very difficult to have investors put up money for gaseous diffusion because it is a technology dynosaur and the amounts that are being talked about are literally many billions of dollars that you have built up. I think the sheer size of it is going to make it such a complicated thing that it would be a very, very difficult thing to finance privately.

We think the idea we have come forward with is a bite-sized piece that could go out as a stand-alone initiative for financing. That is something that would be very difficult to get separate financing for a government corporation that we could finance it, and it has a chance to move forward in a healthy manner.

We certainly are not wanting a U.S. Government corporation not to succeed. We would hope it would succeed. We think we can be an element in helping it to succeed.

Senator **FORD**. What is the capital cost that you referred to awhile ago? I think you said it was capital intensive.

Dr. **ROBINSON**. Let me see. I have seen estimates of our total investment in gaseous diffusion. If moved up to today's value, it would exceed $10 billion.

Senator **FORD**. But you are talking about the capital intensive and how you are going to be able to handle it, but on the balances what you are requesting is that the government turn this operation as it is up to now over to you.

Dr. **ROBINSON**. Oh, I am sorry. If you are talking about our operation, the gas centrifuge, what was invested in that plant was $1.4 billion. They have it today trying to get anything they could for scrap value, something like 1 percent to 2 percent of that. We have proposed that that be signed over to us with a payback that, as our industry makes a profit, we return that in royalty to the government at an appropriately negotiated scale that would exceed the value it has today.

Mr. **LAFOND**. That is regarding the capital investment for our proposal on the centrifuge plant. We have about $300 million of capital that needs to go into that plant to bring it to the level we are talking about, of which about half of that would come from reinvested revenues.

Senator **FORD**. Well, if you started from scratch, how much would it cost you?

Mr. LaFond. We do not know. If we started from scratch, it would not be economical.

Dr. Robinson. I think it is out of the question.

Senator Ford. So if you did not get this for zilch, you would not want to get in. Right?

Mr. LaFond. That is right. If it were not for a low-cost entry, it would not work.

Senator Ford. That is right. So I get back—your testimony indicates that AEC's plan would create jobs, provide returns to the Federal Government. On the down side, what is the potential financial loss to the government if AEC is permitted to proceed?

Dr. Robinson. Don?

Mr. Repici. The loss, Mr. Chairman, would be the interruption of the decommissioning efforts which are in abeyance. The government estimates that they have to spend on the order of another $15 million to decommission those plants. We are now on hold. The cost would be the cost of holding. If we were to go forward, they would not have to enter into that decommissioning.

The real cost, Mr. Chairman, that I think the Department of Energy sees in this is the question of can they live with someone else, the issue that you raised, sir, can they live with a competitor? I do not think it is really a financial issue.

If you look at the finances, the government will profit handsomely from where we are. There is a point, Mr. Chairman, if I might, of real misunderstanding about how the DOE does business. The DOE has done very, very well in the face of foreign competition, and it has done it by being clever. It has a large capacity at Paducah and Portsmouth. It runs those plants on a minimum amount of expensive firm power. Then it buys power whenever it can off the grid at very, very attractive prices.

The trouble, Mr. Chairman, is it can only buy that power for about 50 percent of the time. I am sorry.

Senator Ford. That is all right. I am just getting staff to clear my mind. Sometimes they blow it, but——

[Laughter.]

Mr. Repici. Mr. Chairman, I will be very brief, but it is a key piece that I think is misunderstood.

That power is available at half the time. That means that above a certain level of production, the Department must drop that cheap power and add expensive power. When that happens—and I am forgetting repayments and all the other "adds" that you, sir, could take care of—but you cannot lower the cost of electricity. It gets to the point where they have to increase the amount of baseload and it gets expensive.

Then there is a debate as to at what point in production does the incremental cost of production get very expensive? Then the enterprise becomes cost ineffective. What we are proposing is, literally by the existence of AEC—and, Mr. Chairman, you can put the controls on what we are about to do—but by saving that technology and letting us go forward, if there is more demand beyond which the DOE can cost-effectively meet it, we can meet it.

Dr. Robinson. I think there is a very important follow-up. That is a confusion that we would, by necessity, compete against the new corporation. Today the U.S. is only getting——

Senator **Ford**. It would have to. It is the same market, now.

Dr. **Robinson**. But the market that the U.S. is serving is less than 50 percent of that total market today. We can go after the other 50 percent.

Senator **Ford**. That is why we are making the corporation. We want to get that market back. You act like we are not trying to do that.

Dr. **Robinson**. Oh, no, sir, I do not.

Senator **Ford**. If you had the only answer out there, I would probably sit down and make a deal, but I do not think you have the only answer.

Dr. **Robinson**. No. I applaud you for doing it. I think you have got a very tough road.

Senator **Ford**. Oh, I understand that. I have been there before. Daddy always told me, when you take hide off and it grows back, you are tougher. I am one tough son of a buck, I want you to know that. [Laughter.]

Will your proposal entail any additional cost or future financial exposure to the Federal Government?

Dr. **Robinson**. We have tried to structure it so that it will not.

Senator **Ford**. But that does not mean it will not, though.

Dr. **Robinson**. We would put forward a bond that any additional equipment which should become contaminated with UF-6 above that which has already been done at Portsmouth, it would pay for those decommissioning costs. We do not think there is a substantial, or even a very quantifiable real risk to the government from proceeding with this.

Mr. **Repici**. But we will put that money up, Mr. Chairman, up front.

Senator **Ford**. What kind of royalty payments are you all proposing for the use of the government's centrifuge technology?

Dr. **Robinson**. Mr. Chairman, that is a negotiable item, but we have target numbers. Over the course of the next 15 years we are talking about a combination of taxes and royalties of approximately $500 million. The exact amount of royalty in the mix would be a subject of negotiation with the Department.

Senator **Ford**. I have to go vote, so that means you are off the hook. [Laughter.]

As of this moment, in my legislation I am not going to peel this off. I just wanted to lay it out on the table and be up front with you. I have not been convinced that we ought to take it out. Other people have tried to. I understand your position, and I applaud you for it. But in my mind, with the fix I have, I think we ought to keep it together, keep it in that government corporation, and go from there.

I know you do not like to hear that, but I am just one. You have 99 others to work on, and you probably will start. You have some awful good people working for you, particularly when the White House says just give it away.

As we conclude this testimony today, would you submit to the Committee—we have talked a lot about proposals, and we have had bits and pieces—but would you submit a complete proposal to the Committee?

Dr. **Robinson**. Yes, sir, we will. We have a full and up-to-date one today that we will deliver to you.[1]

Senator **Ford**. I think we need that. You keep telling me how great it is, and it is awful hard for me to refute that statement because I do not have anything in my hot hands, and I cannot read it, and I have not had a chance to go through it to satisfy myself.

Dr. **Robinson**. I can tell you, being involved with enrichment for many years, and most of the folks I know in the industry believe that it is something that needs to be done and would be very attractive for the country. I think the government will miss a big opportunity if they do not go foward with it.

Senator **Ford**. Well, I have heard that before on other things, and we have missed a lot, but somehow or other the ones we miss, it is the ones we did not have to pay for.

I thank you very much, gentlemen. We appreciate your testimony.

[Whereupon, at 12 noon the hearing was adjourned.]

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[1] Proposal retained in subcommittee files.

APPENDIX

ADDITIONAL MATERIAL SUBMITTED FOR THE RECORD

WRITTEN STATEMENT OF

NOLAN W. HANCOCK

ON BEHALF OF THE

OIL, CHEMICAL AND ATOMIC WORKERS INTERNATIONAL UNION

TO THE

ENERGY RESEARCH AND DEVELOPMENT SUBCOMMITTEE
SENATE ENERGY AND NATURAL RESOURCES COMMITTEE

CONCERNING THE

FUTURE OPERATION OF U.S. URANIUM ENRICHMENT PLANTS

MAY 28, 1987

Mr. Chairman, I want to thank you for this opportunity to make some written comments regarding the future operation of the U.S. uranium enrichment plants. As you are aware, the Oil, Chemical and Atomic Workers International Union (OCAW) represents the workers at the enrichment facilities at Oak Ridge, Tennessee; Paducah, Kentucky; and Portsmouth, Ohio. We have represented these workers for many years and are vitally concerned over the future and well being of these workers and their communities, as well as the long-term future of the uranium enrichment plants in America.

If the right decisions are not made regarding the future of the U.S. enrichment facilities, I fear the fate of these facilities will be complete decimation -- the same fate as the U.S. uranium mining and milling industry, due to foreign importation.

I want to specifically respond to the Ford Amendment (0176) which would create the U.S. Enrichment Corporation. This proposed amendment to S. 1084 would create a U.S. Enrichment Corporation for the operation and management of a uranium enrichment enterprise.

OCAW supports the concept of setting up an enrichment corporation for the general operation of the enrichment facilities. However, OCAW would oppose changing the present licensing authority from the Department of Energy (DOE) to the

Nuclear Regulatory Commission (NRC). We would oppose any licensing change that would put the three enrichment plants under NRC regulation. Our opposition is supported by the fact that OCAW has represented many workers that are under the jurisdiction of both DOE and NRC for more than 30 years.

Our past experience in dealing with the NRC has been negative and troublesome. Most importantly, but certainly not the only example, NRC has shown little concern for the health and safety of working people -- a most important concern of the OCAW. Therefore, we oppose any proposed change of the operating authority for the U.S. Enrichment Corporation from DOE to NRC. We sincerely hope you will agree to continue to operate the enrichment plants under the authority of the Department of Energy.

We do agree, however, that the facilities should be exempt from all taxation except for real property taxation, and that all employees would be considered as federal employees. We also agree that the initial government recoverable investment is $364 million to be paid for with interest over 20 years.

We are in general supportive agreement with the balance of proposals under this amendment and we urge the Committee to move this legislation forward as expeditiously as possible.

NATIONAL TAXPAYERS UNION

A NONPARTISAN, NONPROFIT ORGANIZATION DEDICATED TO THE PUBLIC INTEREST

325 PENNSYLVANIA AVENUE, SOUTHEAST WASHINGTON, DISTRICT OF COLUMBIA 20003 TELEPHONE: AREA CODE (202) 543-1300

[illegible] 17 '87

May 22, 1987

The Honorable J. Bennett Johnston
United States Senate
Washington, D.C. 20510

Re: Budget Reconciliation and the Department of Energy's Uranium Enrichment Program

Dear Senator Johnston:

The National Taxpayers Union (NTU) is writing to encourage you to support the efforts of Chairman Gray and the House Budget Committee to maintain the integrity of the Uranium Enrichment Program of the Department of Energy (DOE) by requiring it to comply with the law. We do, however, believe that much more can and should be done.

DOE owes $8.8 billion to the Treasury. DOE, as the successor of the now abolished Atomic Energy Commission (AEC), is obligated under section 161v. of the Atomic Energy Act, 42, U.S.C. 2201v., to recover all the costs associated with its civilian uranium enrichment program within a reasonable period of time (determined to be 10 years).1/ Unfortunately, DOE has failed to discharge this statutory obligation. At hearings before the Energy and Power Subcommittee of the House Energy and Commerce Committee on April 8, the General Accounting Office testified that the accumulated debt of the civilian enrichment program is now $8.8 billion.2/

1/ *See, e.g.,* Letter from Comptroller General to the Honorable John D. Dingell (Dec. 27, 1984).

2/ Statement of Keith O. Fultz (GAO) before the Subcommittee on Energy and Power of the House Committee on Energy and Commerce, April 8, 1987.

DOE is acting illegally. DOE is making essentially no effort to recover this debt. Indeed, the agency claims the authority to "write-off" all but $3.0 billion of this amount.3/ Moreover, the agency claims the authority to take additional write-offs.4/ In short, DOE has unlawfully added $5.8 billiion to the national debt burdening U.S. taxpayers and to the budget deficit; and has promised to add more. As GAO has repeatedly said, these actions violate section 161v. of the Atomic Energy Act.5/ To make matters worse, DOE is actually cutting its enrichment prices6/ and is liquidating the government's uranium stockpile at below-market prices.7/

DOE's argument that it must take a "write-off" is false and misleading. DOE argues that it must cut its prices and take the unlawful "write-off" because to fail to so act will cause it to lose enrichment business. DOE's contention is false and misleading. In testimony before the Energy Research and Development Subcommittee of the Senate Energy and Natural Resources Committee on May 4, experts from Booz-Allen (who researched this and related issues under contract

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3/ See, e.g., 51 Fed. Reg. 3624 (1986).

4/ See, 51 Fed. Reg. 22146 (1986).

5/ E.g., note 1 supra, and Letter from J. Dexter Peach (GAO) to the Honorable John Dingell and Richard Ottinger (August 10, 1984); Statement of J. Dexter Peach before the Energy Conservation and Power Subcommittee of the House Energy and Commerce Committee (for release December 11, 1985); GAO, Financial Audit, DOE Uranium Enrichment Activity Financial Statements: September 30, 1984, at 1 (May 1986); Statement of Keith Fultz (GAO) before the Energy and Environmental Subcommittee on the House committee on Interior and Insular Affairs (August 14, 1986).

6/ See, e.g., Nuclear Fuel, at 3 (December 16, 1985).

7/ DOE is pricing government uranium for distribution at only $9 per pound (see 49 Fed. Reg. 13413) (1984); GAO, Report to the Chairman, Subcommittee on Energy Conservation and Power, House Committee on Energy and Commerce, Information on DOE's Cost and Pricing of Uranium Enrichment Services, at 16 (April 25, 1984). The spot market price for uranium is currently about $18, and the long term contract price is higher.

to Martin-Marietta, operator of DOE's enrichment plants), testified that DOE cannot lose business until 1995, in essence regardless of its prices. This is due to a lack of significant uncommitted foreign enrichment capacity as well as to the terms of DOE's contracts. The Booz-Allen testimony in effect confirmed that DOE could charge higher prices, and could recover more, if not all, of its costs. In short, the agency should repay its debt; and it should not be allowed through false and misleading information to seek a totally unwarrented and unnecessary taxpayer bail-out.

DOE can prevent loss of domestic business and assure recovery of all the $8.8 billion debt under existing law. Even if DOE were faced with a possible loss of business, the agency could prevent any significant loss of business by requiring U.S. utilities to employ the agency's uranium enrichment services under sections 161b and p of the Atomic Energy Act, 42 U.S.C. 2201 (b) and (p). These provisions grant the old AEC (now DOE) broad authority to issue regulations or orders to carry out any of the purposes of the Atomic Energy Act and are, in fact, the authority under which DOE currently limits enrichment imports to 70% via its enrichment contracts. See Westinghouse Electric v. United States, 598 F.2d 759 (3d Cir. 1979) (broad authority). In sum, DOE could require U.S. utilities to employ its services at a price adequate to recover all of the agency's costs. In this period of enormous government deficits and cuts in programs relating to health, welfare, jobs, education and the environment, it is difficult to understand why DOE should be permitted to compel taxpayers to underwrite to the tune of billions of dollars an ostensibly self-supporting fuel program for the benefit of foreign and domestic nuclear utilities.

NTU supports efforts to recover the DOE enrichment debt. We are encouraged that the House Budget Resolution would require DOE to repay $200 million of the $8.8 billion debt to the U.S. Treasury. We note, however, that at this rate the principal, much less the interest, will not be fully repaid for 44 years. We believe more should be done. DOE should be required to impose "exit fees" on all its utility customers, foreign and domestic, who terminate contracts prematurely. DOE should be required to exercise its authority under section 161b. and p. of the Atomic Energy Act to compel domestic utilities to use its services at a price adequate to recover all costs. There is no unfairness in requiring cost recovery from the nuclear utility customers of DOE. The nuclear utility industry requested and indeed demanded that DOE invest in the enrichment plants and facilities which the agency now seeks to "write-off," and the utility industry respresented that it would bear the costs.8/ Furthermore, full recovery of costs would have an insignificant impact on the cost of electricity for consumers (about a mil per kwh at most).9/

NTU opposes the efforts in the Senate to grant further enormous subsidies to DOE's civilian enrichament program. NTU requests your assistance and support in resisting efforts to impose arbitrary write-offs of DOE's debt. Specifically, we oppose legislation proposed by Senators Ford and Johnson (S.1084 and amendment 176 at 133 Cong. Rec. S5637) and Domenici, et al. (S.1100 and amendment 177). Both proposals would establish a government controlled enrichment corporation and remove the protection the taxpayers enjoy under current law from compulsory and continued subsidization of the enrichment proogram. Furthermore, both proposals "forgive" over 95 percent of the $8.8 billion debt. The proposals also appear to require the infusion of vast amounts of money into the enrichment program, without solving the underlying problems. Furthermore, the proposals are inconsistent with U.S. obligations under GATT and would eliminate effective oversight of the enrichment program. NTU is concerned that these efforts not be allowed to flourish either in their own right, or through the budget process.

8/ *See, e.g.*, EEI testimony, Future Structure of the Uranium Enrichment Industry, Hearings before the Joint Committee on Atomic Energy, 93d Congress, 2d Sess. 175 (1974); Uranium Enrichment Policy, Hearings before the Subcommittee on Energy Research and Development, 95th Cong., 2d Sess. at 80, 87, 444 (1978); Uranium Enrichment Policy, Hearings before the Energy Conservation and Power Subcommittee of the House Energy and Commerce Committee, 98th Cong., 1st and 2d Sess. 315-26 (1983-84).

9/ *See* Memorandum, Analysis of Maximum Increase in Average Nuclear Fuel Costs Assuming Enforcement of Section 161v ..., attached to NTU testimony before the Energy and Power Subcommittee of the House Energy and Commerce Committee, April 8, 1987.

We appreciate and heartily support the efforts of the House Budget Committee to begin to recover the enrichment program debt.

Sincerely,

Jill Lancelot

Jill Lancelot
Director of Congressional Affairs

cc: Chairman John D. Dingell
Chairman Morris K. Udall
Chairman Philip R. Sharp

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PAUL RODGERS
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GAILE ARGIRO
Treasurer

July 28, 1987

The Honorable J. Bennett Johnston, Chairman
Committee on Energy and Natural Resources
United States Senate
Washington, D.C. 20510

Dear Senator Johnston:

I enclose under cover of this letter two resolutions concerning electricity which were adopted by the Executive Committee of the National Association of Regulatory Utility Commissioners (NARUC) at our recent San Francisco meetings. One concerns clean coal technology and the other addresses nuclear enrichment services.

The Resolution on Clean Coal Technology expresses strong support for the development and deployment of clean coal technologies, but urges Congress to be extremely cautious in mandating regulatory incentives and allowing exemptions from the Public Utilities Holding Company Act and the Federal Power Act. Regulatory incentives and exemptions represent an unknown cost to ratepayers which should be fully analyzed and measured against the well-studied costs of currently-available technologies.

The resolution further expresses our support for conservation programs, which, in our view, are equally as important, vis-a-vis acid rain, as are clean coal technologies. Clean coal technology projects should not be funded at the expense of Federal energy conservation programs, especially since conservation can mitigate the effects of acid deposition and help provide a grace period in which the new technologies can be properly developed and tested. We wish to stress that a distinction should be maintained between the development and the deployment phases of clean coal, so that untested technologies are not put prematurely into widespread commercial use.

The Resolution on Nuclear Enrichment Services expresses support for the restructuring of the Federal Government's enrichment services program and advocates the formation of a government corporation whose relationship with the public is as an entrepreneur, rather than a sovereign, and where users, rather than taxpayers, will support the cost of such services. The NARUC also recommends that Congress prohibit OMB and GAO implementation of retroactive recovery payments for enrichment services.

Finally, I would like to note that the NARUC Committee on Electricity also discussed recently-introduced House legislation entitled the Regulatory Fairness Act (H.R. 2858). We are told that a similar Senate bill is expected soon. The Committee voted to support in principle the concept of symmetry between rate increases and refunds at the FERC, but felt it premature to take a specific position on the bill itself, pending further analysis and a reaction from FERC staff. The Committee did, however, authorize NARUC to testify on this issue in the event that legislative hearings are held.

Please feel free to contact me directly at (202) 898-2206 if you or your staff have any questions concerning the enclosed. Resolutions concerning natural gas are being forwarded under separate cover.

Very sincerely yours,

John M. Flumerfelt
Director of Congressional
Relations

Enclosures

cc: Each member of the Senate Committee on
Energy and Natural Resources

The Hon. Edwyna G. Anderson, Chair
NARUC Committee on Electricity

(Committee Note.--Resolution No. 1 has been retained in Subcommittee files.)

Executive Committee Resolution No. 2

Resolution on Nuclear Enrichment Services

WHEREAS, The supply of enrichment services to the United States civilian nuclear power industry is a critical and necessary element in the fuel cycle of our second largest source of electric generation; and

WHEREAS, The Federal government has provided enrichment services to electric utilities on a timely, reliable, and dependable basis for a period now approaching two decades, operating as a monopoly until recent years; and

WHEREAS, The introduction of international competition has resulted in the Federal government surrendering a large share of the uranium enrichment program marketplace so that it is now experiencing excess production capacity as well as a shortage of revenues required to finance technology improvements; and

WHEREAS, The Federal government's ability to compete in the realities of a competitive market place has been hindered by the actions of the Office Management and Budget (OMB) and the General Accounting Office (GAO) to collect "unrecovered government costs" ranging from $3.5 to $8.8 billion for transfer to the U.S. Treasury; and

WHEREAS, The principle of "unrecovered government costs" as well as the employed methodologies underlying these calculations advanced by OMB and GAO are highly controversial and were never contemplated and thus represent a substantial departure in the approach by which appropriations and revenues have funded enrichment activities; and

WHEREAS, The implementation of such retroactive additional payment program places a substantial financial burden upon ratepayers and may prompt the electric utility industry to turn to international markets to provide uranium enrichment services; and

WHEREAS, The provision of uranium enrichment services constitutes a business enterprise with characteristics which may be distinguished from traditional government functions which do not involved a buyer-seller relationship; and

WHEREAS, The Federal government's uranium enrichment program could function more effectively as a government corporation where it could respond to the dictates of the market place; and

WHEREAS, The implementation of artificial trade or usage restrictions under consideration by the Congress of the United States will serve to increase the price of electricity and adversely afect the ability of the Federal government to compete in the international marketplace; now, therefore be it

RESOLVED, That the Executive Committee of the National Association of Regulatory Utility Commissioners (NARUC), assembled at its Summer Committee Meetings in San Francisco, California, supports the restructuring of the Federal government's enrichment service program so as to operate as a fully-competitive industry responding to market forces and thus providing low-cost energy to ratepayers, provided that the Congress of the United States concludes:

1. That unsubsidized savings to electric utility ratepayers are reasonably likely to occur;

2. That no elimination of safeguards over strategic nuclear materials will occur;

3. That privately owned enrichment facilities will be regulated by the Nuclear Regulatory Commission;

4. That the common defense and security of the nation will be protected; and

5. That competition in the provision of enrichment services will be furthered, and unregulated monopoly power will not be granted; and be it further

RESOLVED, Upon such findings, the NARUC Executive Committee recommends that:

a. The Congress of the United States favorably consider legislative proposals that would establish a government corporation that would operate similar to other government functions where the relationship with the public is one of an entrepreneur rather than a sovereign, and where users, rather than the general taxpayers, will be supporting the cost of such services.

b. The Congress of the United States prohibit OMB and GAO from implementing retroactive recovery payments to permit the pricing of enrichment services on a basis of participation in a competitive market.

c. The free trade policies with respect to the supply of enrichment services be continued.

Sponsored by the Committee on Electricity
Adopted July 22, 1987

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